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TESIS DOCTORAL

La pérdida de valor en activos estratégicos: el caso de la dilución de marcas

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CAPÍTULO I. INTRODUCCIÓN GENERAL

Los activos estratégicos de la empresa se definen como un conjunto de recursos y capacidades escasos, apropiables, especializados, difíciles de transar e imitar, que le brindan a la empresa una ventaja competitiva (Amit y Schoemaker, 1993), y cuyo desarrollo y explotación está influenciado por la administración de la empresa. Dentro de este grupo de activos se encuentran los intangibles, como el capital humano, los procesos, licencias, franquicias, patentes y las marcas (Epstein y Mirza, 2005). Se ha demostrado que los activos intangibles pueden llegar a ser más valiosos que los activos tangibles dentro de la empresa (Hulten y Hao, 2008), y se sostiene que entre los intangibles más valiosos están las marcas (International Standard Organization, 2010).

Teóricos de la perspectiva basada en recursos (*Resource-Based View*, RBV) han reconocido que la ventaja competitiva se centra en el beneficio percibido por el consumidor, que, por medio de la transacción, se traduce en renta para la firma (Peteraf y Barney, 2003). De manera más específica, se argumenta que cuando el consumidor llega a percibir valor a partir de sus relaciones y experiencias con la empresa y los productos bajo una marca determinada, se genera la ventaja competitiva para la firma. (Srivastava, Fahey y Christensen, 2001). Una marca fuerte se traduce en valor para la empresa por el hecho que genera efectos favorables en los consumidores que se evidencian en el mercado en conductas como una mayor compra de los productos de la marca, recomendación a otros consumidores, mayor fidelidad o lealtad con la marca o empresa, o un boca a boca positivo (Aaker, 1991; Keller y Lehmann, 2006). Luego, estas conductas se reflejan en la empresa propietaria de la marca en mayores ingresos, flujo de caja y mejor valoración de sus acciones (Keller y Lehmann, 2006). Farquhar (1989) explica que una marca fuerte genera ventaja competitiva para la empresa por diversos

motivos. Primero, porque funciona como una plataforma para lanzar nuevos productos o vender licencias. También, porque permite soportar situaciones de crisis o cambios de preferencias de los consumidores, lo que denomina capacidad de recuperación de la marca (*brand resilience*). Además, Farquhar señala que las marcas fuertes funcionan como barrera para la entrada de competidores al mercado, lo cual se basa en el nivel de dominio de la marca, es decir, en la fuerza de la asociación dentro de la mente del consumidor entre una categoría de producto y la marca.

Sin embargo, una de las desventajas derivadas del mismo éxito de las marcas dentro de un mercado es el hecho de que otras empresas pueden adoptar una conducta de *free rider*, por ejemplo, imitándola, para aprovecharse de algunos de los costos incurridos por la primera. Morgan (2000) planteó que, para que la ventaja competitiva de la firma sea sostenible en el tiempo, no basta que la administración de sus recursos haya sido capaz de posicionar la marca y sus productos favorablemente en el consumidor. Morgan considera que la ventaja lograda con el posicionamiento favorable es de corto plazo y motiva la entrada de competidores. Luego, en el modelo conceptual de Morgan (2000), las acciones de la empresa tendentes a mantener y proteger de la ventaja inicial es lo que generará valor para el cliente en el largo plazo. Esta protección tiene como objetivo evitar que los competidores puedan duplicar los recursos de la firma y erosionar la percepción de valor que los consumidores tienen.

Desde una perspectiva basada en el consumidor, el capital de marca se define como el efecto diferencial que el conocimiento de la marca tiene sobre las respuestas del consumidor a las actividades de marketing de la empresa (Keller, 1993). Estas respuestas tienen que ver con las percepciones, preferencias y conductas de los consumidores hacia la marca, las cuales, según esta definición, son más positivas cuando el consumidor está

más familiarizado con la marca y ha formado en su memoria asociaciones únicas, fuertes y favorables (Keller, 1993). Varios autores reconocen que el capital de marca es un constructo multidimensional (Christodoulides y de Chernatony, 2010; Buil, de Chernatony y Martínez, 2008, 2013). Keller (1993) plantea que el conocimiento de la marca se fundamenta en dos dimensiones: notoriedad de marca e imagen de marca; mientras que Aaker (1991) plantea las siguientes cuatro[1] dimensiones: notoriedad de marca, asociaciones, calidad percibida y lealtad.

La literatura sobre marcas ha mostrado que el capital de marca puede verse reducido – diluido - por varios motivos, algunos internos de la empresa, como otros externos. Desde una perspectiva general, las creencias y actitudes hacia la marca pueden verse afectadas negativamente por acciones directas de la propia marca - problemas de calidad, errores en su política de precios, falta de responsabilidad social, extensiones de línea o acciones inconsistentes con la imagen de marca, o incluso una selección no idónea del canal minorista; o bien, por el comportamiento de terceros - copia o imitación fraudulenta de la marca, confusión con otra marca, confusión con un producto de menor calidad, comparaciones engañosas en cuanto a precio y calidad, utilización por terceros de la marca renombrada en otras categorías, utilización de la marca en situaciones engañosas, etc. (Loken y Roedder John, 2010).

Cuando la dilución se produce por el uso no autorizado de la marca por parte de terceros, se denomina dilución de marcas registradas (*trademark dilution*). Se distinguen dos formas de dilución de marcas registradas: dilución por empañamiento y dilución por

[1] Una quinta dimensión – no basada en el consumidor - planteada por Aaker se refiere a activos tangibles o intangibles con los que la empresa protege o incrementa el capital de marca, como el registro de marcas, patentes, o las relaciones con los canales de distribución.

degradación. La dilución por empañamiento (*blurring*) es el debilitamiento de las asociaciones entre una marca con su categoría de producto (Simonson, 1993) y otros aspectos distintivos como sus atributos (Pullig, Simmons y Netemeyer, 2006). Un ejemplo de este caso es el efecto que la marca de servicios legales Hyatt podría tener sobre las asociaciones de los consumidores de la famosa marca de hoteles Hyatt (*Hyatt Corp. v. Hyatt Legal Services, 1984,* citado en Morrin y Jacoby, 2000) (Figura 1.1).

Figure 1.1. Hyatt Corp. v Hyatt Legal Services, 1984

Por otro lado, la dilución por degradación (*tarnishment*) se refiere a una reducción en la evaluación de una marca original debido al surgimiento de una nueva marca, porque crea asociaciones con percepciones no deseadas (Simonson, 1993), o una reducción del nivel de preferencia y actitudes a la hora de evaluar la marca (Cerviño, 2009). Por ejemplo, Cerviño, Gómez y Cruz-Roche (2005) mostraron que el surgimiento de una marca de whisky J♦B, de bajo precio y calidad, redujo la evaluación que hacían los consumidores sobre los atributos de la marca famosa de whisky importado J&B. Otro ejemplo son los bocados de perro de marca *Dogiva*, que parodian la marca de chocolates finos *Godiva*[2] (Morrin y Jacoby, 2000) (Figura 1.2).

[2] Sin embargo, aunque era un ejemplo de marca imitadora degradante, Morrin y Jacoby (2000) finalmente no midieron los cambios en la evaluación de la marca Godiva por parte de los consumidores, sino que se limitaron a las medidas de dilución por empañamiento para todas las marcas utilizadas en su estudio.

Figure 1.2. Grey v. Campbell Soup Co. 1986

En un estudio para una muestra de 131 marcas famosas en EEUU, Brauneis y Heald (2011) encontraron que el uso no autorizado de los nombres de marcas equivalía a 10 veces el uso autorizado, lo que refleja la magnitud del problema en la actualidad. Debido a la importancia de la marca para sostener la ventaja competitiva de la empresa, y los riesgos a la que está expuesta, se propone estudiar en esta tesis las consecuencias del uso no autorizado de marcas registradas sobre su capital de marca y la conducta de compra de sus consumidores. En lo sucesivo, la marca famosa se podrá denominar también *senior brand*, mientras que la marca no autorizada o imitadora (usualmente el mismo nombre de marca o una variante muy similar de ésta) se podrá denominar *junior brand*.

La tesis está estructurada en tres artículos científicos. Los dos primeros se relacionan con casos de *blurring*, mientras que el tercero se enfoca en casos de *tarnishment*. El primer artículo, titulado "*Trademark dilution by blurring: a consumer-based brand equity perspective*", estudia el efecto del uso no autorizado de la marca sobre su capital de marca, bajo la conceptualización multidimensional de Aaker (1991) y sobre un constructo global de capital de marca, considerando el efecto moderador de la similitud entre la marca famosa y la imitadora. El segundo artículo se titula "*Trademark dilution and its practical effect on purchase decision*" y tiene como objetivo extender el estudio del impacto de la marca imitadora sobre la decisión de compra de los consumidores de la marca famosa, considerando el efecto mediador del capital de marca y el efecto moderador de la similitud y el involucramiento con la categoría de producto de la marca famosa. El tercer artículo,

denominado "*An empirical assessment of dilution by tarnishment: brand evaluation, intentions, brand equity and purchase decision*" se enfoca en el estudio de probables casos de degradación, analizando su efecto en: valoración de los atributos de la marca, intención de consumo y compra, capital de marca (con sus múltiples dimensiones) y decisión de compra.

En resumen, los resultados de los tres artículos muestran que los casos planteados como posible *blurring*, de hecho diluyen el capital de marca y, consecuentemente, tienen un efecto práctico reduciendo la compra de los productos de las marcas famosas. En cambio, los casos de hipotético *tarnishment* no diluyeron las marcas (en la gran mayoría de mediciones), lo que se puede explicar con teorías de la Psicología (*Heider's Balance Theory*) o sobre el procesamiento de información incongruente (*subtyping model*). En los tres artículos se evidenció el efecto moderador de la similitud, ya sea reduciendo la dilución o reforzando dimensiones de capital de marca en los casos en que no habían sido diluidas.

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CAPÍTULO II. TRADEMARK DILUTION BY BLURRING: A CONSUMER-BASED BRAND EQUITY PERSPECTIVE [3]

Abstract

This study contributes to the literature about trademark dilution, by investigating the effect of unauthorized use of famous brand names (senior brands) on their brand equity. The theoretical model is based on Aaker's multidimensional consumer-based conceptualization of brand equity, together with an "overall brand equity" construct (OBE), consisting of the perceived added value that a brand gives a product. An experimental design with four real senior brands and sixteen fictitious unauthorized brands (junior brands) was applied to 617 undergraduate students from a large university in Ecuador. Using structural equation models with a bootstrap estimation technique, the results show that awareness of senior brand was not diluted by exposure to junior brands; however, associations, loyalty and OBE were diluted. There was a reduction in dilution due to greater similarity between junior and senior brands, according to the Human Associative Memory (HAM) model. Finally, only dilution of loyalty was attenuated by familiarity with senior brands. Considering that brand equity has desirable consequences on consumer behavior and firm value, our results highlight the importance of protecting brands against unauthorized use by third parties.

Keywords: trademark dilution, consumer-based brand equity, similarity, familiarity, brand awareness.

[3] Manuscrito en revisión en el Journal of Consumer Behaviour

2 Introduction

Unauthorized use of famous brand names by third parties - either in the same or in different product categories - equals ten times the authorized uses in the United States (Brauneis and Heald, 2011). Among the consequences of this issue is trademark dilution, defined as a reduction in brand equity due to the emergence of an imitator or unauthorized user (junior brand) (Simonson, 1993) that generates negative cognitive, affective, or behavioral effects on famous brand's consumers (Loken and John, 2010). The literature identifies two types of dilution: blurring and tarnishment. Dilution by blurring is the weakening of the associations (in consumers' memory) between the brand and its distinctive aspects, e.g. product category and attributes (Choy and Kim 2013; Pullig et al. 2006). For example, a junior brand named Kodak pianos, which uses a similar logo to senior brand Kodak Film Processing, could reduce consumers' ability to recognize or associate the senior brand with its product category (Morrin et al., 2006). Tarnishment is explained as a negative change in senior brand evaluation (Simonson, 1993), because the junior brand has added negative associations to (or negatively modified the existing ones in) the consumer mental schema. Tarnishment cases typically relates to unsavory or unwholesome products or services, parodies or criticism. For example, the slogan "Enjoy cocaine" with the same typography and colors of Coca-Cola, could add negative associations to the senior brand Coca-Cola in consumer memory (Loken and John, 2010). In summary, the conceptualization of blurring and tarnishment is focused on the strength and content of associations, respectively (Jacoby, 2008).

However, from a consumer perspective, brand equity (BE) is a perception of added value that a brand gives a product, compared to the same unbranded product (Aaker 1991; Farquhar 1989; Keller 1993). This added value is supported on several dimensions that

go beyond associations, so it is presumed that other aspects of BE could be diluted when a junior brand enters the market. Aaker (1991) proposes four dimensions[4] for BE: awareness, associations, perceived quality and loyalty. Keller (1993) identifies awareness and brand image as the principal dimensions of BE. Some scholars (Buil et al. 2008, 2013; Christodoulides and de Chernatony 2010; French and Smith 2013) argue that Aaker's conceptualization is one of the most accepted in the marketing literature. This study uses Aaker's BE dimensions because this framework describes a chain of effects of junior brand on senior brand equity, from a consumer perspective.

Empirically, dilution has been evidenced with several dependent variables: strength of associations (Morrin and Jacoby 2000; Morrin et al. 2006; Pullig et al. 2006), brand personality (Choy and Kim, 2013), probability of inclusion of the brand in the evoked set (Pullig et al., 2006), and purchase intention (Choy and Kim 2013; Pullig et al. 2006). However, these studies have presented neither a conceptual framework nor empirical evidence to analyze the chain of effects generated by junior brands on BE dimensions and, ultimately, on the overall perception of added value (overall brand equity). Therefore, the purpose of this study is to analyze how BE dimensions are affected by junior brands, and if this hypothetical effect extrapolates to the overall brand equity, based on the proposed theoretical framework. Following the line of study of previous scholars on trademark dilution (Choy and Kim 2013; Morrin and Jacoby 2000; Morrin et al. 2006; Pullig et al. 2006), this study also focuses on cases of supposedly dilution by blurring in order to deepen understanding of its effects on BE. Specifically, junior brands in different product categories from those of senior brands are used in this study. It can be argued that

[4] These are four dimensions from a consumer perspective. A fifth dimension proposed by Aaker, is a firm-related dimension that includes the legal protection of the brand and relations with distribution channels.

studying this issue is important for marketing literature and practice, since several studies support the influence of BE on desirable consequences on consumer behavior, such as purchase intention, pay price premiums, positive attitude towards extension, brand preference (Buil et al. 2013; Yoo and Donthu 2001), and consequences at firm level, including market share and firm value (Srinivasan and Hanssens, 2009).

In the legal arena, there is a debate over whether famous brands need legal protection against junior brands (Dworkowitz, 2011). Those who say that anti-dilution law is unnecessary argue that the fame of senior brands is enough to offset the potential damage (weakening of associations) derived from junior brands, or even if such damage exists, it may be negligible (Tushnet, 2008). This study attempts to manipulate the level of familiarity of senior brands - as a proxy for their fame - in order to analyze the effect of this variable. Also, the similarity of junior brands is manipulated, using different product categories and attributes, since previous studies have shown that similarity works as a boundary condition for dilution (Morrin and Jacoby 2000; Pullig et al. 2006).

3 Theoretical Background

3.1 Dilution by blurring and brand equity dimensions

According to the Human Associative Memory (HAM) model (Anderson 1983; Teichert and Schöntag 2010), information in consumer memory is stored in networks consisting of nodes (e.g., a senior brand and its distinctive aspects) connected by links (associations). When a junior brand emerges in another product category with some attributes (similar or not to those of the senior brand), new associations are added to the existing network. When the consumer thinks about the brand, all associations compete for activation in memory, thus weakening the initial associations. Such weakening is evident in a reduction

in the likelihood or speed of retrieval of senior brand associations (Burke and Srull, 1988), as some empirical studies show (Morrin and Jacoby 2000; Morrin et al. 2006; Pullig et al. 2006).

Brand equity literature allows hypothesizing about junior brand's effects on senior brand equity (BE) dimensions. Awareness (AWA) is the ability of a potential buyer to recognize a brand when exposed to it, and to recall that a brand belongs to a certain product category (Aaker, 1991). It is also stated that brand awareness represents how well established the brand node is in memory, which, in turn, is a necessary condition for the creation and strength of brand associations (Aaker 1991; Keller 1993). The emergence of a junior brand may not reduce brand recognition, and may even enhance it, because junior brand advertising makes brand name (or other senior brand elements) salient. Brand recall, which involves a link between senior brand and its product category, could be reduced due to new associations added regarding product category and attributes of the junior brand. Considering that we are predicting two distinct effects of a junior brand on AWA, the direction of the net effect depends on the magnitude of each one. Therefore, we propose a bi-directional hypothesis:

H1a: The emergence of a junior brand does not dilute senior brand awareness

H1b: The emergence of a junior brand dilutes senior brand awareness

Associations (ASSO) are links between the brand and attributes, sensations, and/or experiences (Aaker, 1991), that can vary in favorability, uniqueness, and strength. According to the HAM model, a junior brand adds new associations to the original network, thus reducing the strength of senior brand associations. Thus, we make the following prediction:

H2: The emergence of a junior brand reduces the strength of senior brand associations.

Perceived quality (PQ) is the global perception of superiority or excellence of a brand relative to its competitors, which depends on the strength and content (favorability) of associations regarding branded product attributes and performance (Aaker 1991; Zeithaml 1988). Also, a high level of awareness could be a signal to the consumer that the brand has been present a long time in the market and that it offers high quality products (Aaker 1991; Jacoby et al. 1971). Therefore, it can be argued that greater AWA and stronger and positive ASSO could be related to greater PQ (Esch et al. 2006; Yoo and Donthu 2001). If it is possible to reduce awareness, weaken existing associations and, probably, add some irrelevant associations for overall quality evaluation to the senior brand network because of the emergence of a junior brand, then one can conclude that PQ could be diluted. Therefore, we predict:

H3a: The emergence of a junior brand dilutes the perceived quality of the senior brand

H3b: Awareness mediates the effect of a junior brand on the perceived quality of the senior brand

H3c: Strength of associations mediates the effect of a junior brand on the perceived quality of the senior brand.

The concept of brand loyalty (LOY) used in this study reflects the commitment to consume brand products (Oliver, 1999), the extent to which the consumer is attached to the brand (Aaker, 1991), or the intention to select the brand as the first choice (Yoo and Donthu, 2001). As an attitudinal construct, it depends on the salience of beliefs a consumer has about branded products (strength of associations) and the evaluative judgment of those beliefs (content of associations) (Keller, 1993), that includes perceived

quality, positive image and liking (Aaker, 1991). According to this framework, when a junior brand emerges, the weakening of ASSO and dilution of PQU could deteriorate LOY. Therefore, the following hypotheses are postulated:

H4a: The emergence of a junior brand dilutes senior brand loyalty

H4b: Strength of associations mediates the effect of a junior brand on senior brand loyalty.

H4c: Perceived quality mediates the effect of a junior brand on senior brand loyalty.

Despite its multidimensionality, brand equity can also be interpreted, in a general sense, as the added (or incremental) value that a brand prints on a product, compared to a product that does not have that brand (Aaker 1991; Farquhar 1989; Keller 1993). The overall brand equity (OBE) (Yoo et al., 2000) is theoretically related with associations, perceived quality, and loyalty. Awareness has a positive effect on brand equity, signaling quality and acting as an anchor for the formation of associations, as explained before. Thus, unique and favorable associations, as well as a high perceived quality, allow differentiation of the senior brand from its competitors in the minds of consumers (Buil et al., 2013). High levels of loyalty reflect a strong commitment to buy the products of the brand and a low switch probability (Aaker, 1991). It can be argued that when BE dimensions are diluted, the overall construct could also be diluted.

H5a: The emergence of a junior brand dilutes overall brand equity

H5b: Perceived quality mediates the effect of a junior brand on overall brand equity.

H5c: Loyalty mediates the effect of a junior brand on overall brand equity.

3.2 Similarity

Similarity is the level in which category product and attributes between junior and senior brand are perceived as equivalent (Grime et al., 2002). According to the HAM model, a junior brand that shares brand elements with the senior brand (e.g., its brand name), could add new associations to the latter. However, if there is a high similarity between aspects of the junior and senior brands, these two information networks become more interconnected (Jacoby, 2001). When consumers think about the brand, the likelihood and speed of recovery of the initial associations may not suffer a reduction in memory, and may even increase, due to a higher number of interconnected nodes (Humphreys et al. 2000; Pullig et al. 2006). Empirical studies on trademark dilution show evidence in this line (Morrin and Jacoby 2000; Pullig et al. 2006). The next hypothesis therefore reads:

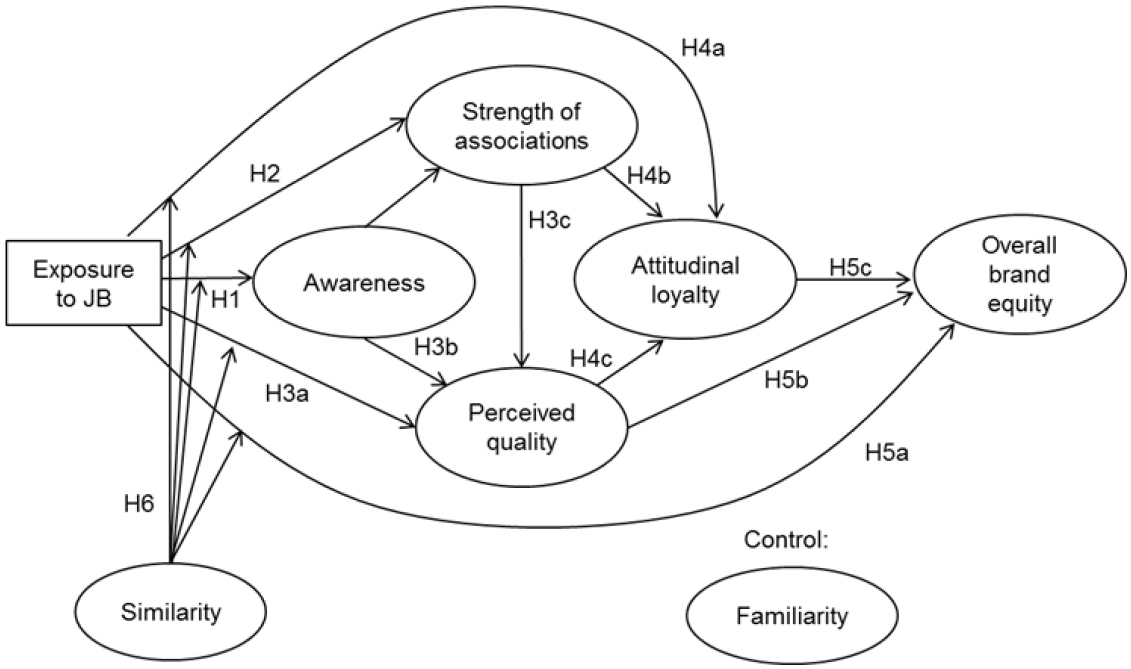
H6: The greater the similarity between junior and senior brands, the lesser the dilution of the latter.

3.3 Familiarity

Brand familiarity is frequently defined as the extent of a consumer's direct or indirect experience with a brand (Alba and Hutchinson 1987; Kent and Allen 1994), and it reflects the consumers' brand knowledge stored in their memory (Campbell and Keller 2003; Cian et al. 2015). Consumers unfamiliar with a brand lack prior knowledge about it and rely on information from advertising or other external cues to form their opinions (Cian et al., 2015) and attitudes (Campbell and Keller, 2003) toward the brand; while consumers familiar with a brand are more likely to interpret new information regarding the brand based on their existing brand knowledge, thus "attenuating the influence of attitude toward the specific ad on attitude toward the brand" (Campbell and Keller, 2003). The

more familiar a brand is to a consumer, the more stable is the associated knowledge structure, which in turn is less likely to be changed (Choy and Kim, 2013). The present study uses familiarity as a control variable. The above described relationships are depicted in figure 2.1.

Figure 2.1. Conceptual model



4 Methods and Sample

4.1 Preliminary Procedures

Four real brands (senior brands), from four different product categories, were used. Two focus groups (men and women) were run in order to preselect the product categories and brands most often used. After several pretests (n between 44-59), the following was

defined: four product categories with their respective senior brands and distinctive attributes[5], and product categories for fictitious junior brands[6] (Table 2.1).

Table 2.1. Selected Product Categories, Senior (SB) and Junior Brands (JB)

Product categories / SB	Distinctive attributes	High product similarity JB	High attribute similarity	Low attribute similarity	Low product similarity JB	High attribute similarity	Low attribute similarity
Toothpaste / Colgate	fresh breath, clean sensation	Buccal spray	fresh mint flavor, clean sensation	cinnamon flavor, does not replace brushing teeth	Chewing gum	fresh mint flavor, clean sensation	blackberry flavor, colorful smile
Deodorant / Rexona[7]	great scents, high protection	*Eau de Toilette*	great scents, long lasting	for kids, kids scent (lavender)	Body wipes	great scents, skin protection	unscented, momentary cleaning
Carbonated soft drink / Coca-Cola	unique flavor, refreshment	Juice	unique flavor, quenches thirst	lemonade, drink it hot or cold	Candy	unique flavor, refreshes	citric flavor, with vitamin
Pen / BIC	inexpensive, high quality	Tablet pen	inexpensive, they never fail	elegant, low compatibility	Watch	inexpensive, they never fail	sophisticated look, not water-resistant

Undergraduate students were used in all these phases of the research. Student samples are justified when the research purpose relates to theory testing, since researchers should be concerned with using a sample that gives the possibility of theory rejection, according to Popper's falsifiability criterion (Calder et al., 1981). This type of sample has been used in all major dilution studies reviewed (Choy and Kim 2013; Morrin and Jacoby 2000; Morrin et al. 2006; Pullig et al. 2006) and is widely used in consumer and marketing research, as reported by Peterson and Merunka (2014).

[5] A qualitative analysis was used, summarizing synonyms and words with similar meanings, in order to identify the most mentioned attributes related to each senior brand.
[6] Five to six suggested categories were evaluated for product similarity to each senior brand product category, from which two junior brand categories were selected for each senior brand.
[7] Known as *degree* in United States and Canada.

4.2 Procedures for Main Study and Measures

Two graphic designers elaborated visual advertisements for junior brands, using the same senior brand name and varying the level of product and attribute similarity (low/high) related to each senior brand. This produced four junior brands (JB) for each senior brand (SB). A total of 618 undergraduate students from a large university in Ecuador were randomly assigned to a 4 (SB=Rexona, Coca-Cola, BIC, Colgate) ×5 (exposure= SB, JB_1, JB_2, JB_3, JB_4) between-subjects design.

First, the participants were shown the visual stimuli (SB or JB) and two additional advertisements about unrelated brands. Then, some demographic questions were asked. Next, the participants were asked a set of questions (21 items) about BE dimensions and OBE for SBs (Netemeyer et al. 2004; Yoo et al. 2000). Brand associations items used in this study are intended to measure the strength of associations (Yoo et al., 2000). Participants reported how familiar they were with each of the SBs (1 item) (Choi et al. 2014; Ferraro et al. 2013; Morrin 1999; Reinholtz et al. 2015). Similarity questions were asked for participants in the treatment conditions only, using Bhat and Reddy's (2001) scales about perceived product fit (2 items). All items related to BE, familiarity and similarity were measured on seven point-Likert scales (Table 2.2).

Items were back-translated, including a check for conceptual equivalence by a Marketing professor, as suggested by Douglas and Craig (2007). The back-translated and original versions of the items showed a high level of coincidence. After data collection, 1 questionnaire was eliminated because of inconsistent responses, which resulted in a final total sample size of N=617 (Female= 60.5%; M_{AGE}=20.98; SD=2.73), with group sample sizes ranging from 30 to 34.

Table 2.2. Scales, Loadings, Reliability and Validity Measures

Item		Scale	CFA standard. weights
Awareness (AWA) (Yoo et al. 2000; Netemeyer et al. 2004):			
CR=0.728; AVE=0.473; ASV=0.465; MSV=0.814			
aa1	I know what X looks like.	(1=Totally disagree - 7=Totally agree)	0.701
aa2	I can recognize X among other competing brands.		0.622
aa3[a]	I am aware of X.		-
aa4[a]	I am aware of X.		-
aa8	When I think of (senior brand product category), X is one of the brands that comes to mind.		0.736
Associations (ASSO) (Yoo et al., 2000):			
CR=0.69; AVE=0.534; ASV=0.418; MSV=0.814			
aa5	Some characteristics of X come to my mind quickly.	(1=Totally disagree - 7=Totally agree)	0.843
aa6	I can quickly recall the symbol or logo of X.		0.598
aa7r	I have difficulty in imagining X in my mind (r).		-
Perceived Quality (PQU) (Yoo et al., 2000):			
CR=0.928; AVE=0.721; ASV=0.43; MSV=0.623			
pqu1	X is of high quality.	(1=Totally disagree - 7=Totally agree)	0.908
pqu2	The likely quality of X is extremely high.		0.883
pqu3	The likelihood that X would be functional is very high.		0.795
pqu4	The likelihood that X is reliable is very high.		0.818
pqu5	X must be of very good quality.		0.836
pqu6r	X appears to be of very poor quality (r).		-
Loyalty (LOY) (Yoo et al., 2000):			
CR=0.913; AVE=0.778; ASV=0.457; MSV=0.719			
loy1	I consider myself to be loyal to X.	(1=Totally disagree - 7=Totally agree)	0.894
loy2	X would be my first choice.		0.91
loy3	I will not buy other brands if X is available at the store.		0.84
Overall Brand Equity (OBE) (Yoo et al., 2000):			
CR=0.826; AVE=0.544; ASV=0.396; MSV=0.719			
obe1	It makes sense to buy X instead of any other brand, even if they are the same.	(1=Totally disagree - 7=Totally agree)	0.699
obe2	Even if another brand has same features as X, I would prefer to buy X.		0.809
obe3	If there is another brand as good as X, I prefer to buy X.		0.756
obe4	If another brand is not different from X in any way, it seems smarter to purchase X.		0.679
Similarity (SIM) (Bhat and Reddy, 2001):			
CR=0.949; AVE=0.903; ASV=0.009; MSV=0.016			
sim1	(junior brand product category) and (senior brand product category) are similar	(1=Totally disagree - 7=Totally agree)	0.985
sim2	(junior brand product category) is like (senior brand product category)		0.914

Familiarity (FAM) (Choi et al. 2014; Ferraro et al. 2013; Morrin 1999; Reinholtz et al. 2015)		
Fam	Regarding the (senior brand product category) X, are you..	(1=Not at all familiar - 7=Very familiar)

***Notes**: **a.** Two items with alternative translation were used, as suggested during the conceptual equivalence analysis. **CR:** composite reliability; **AVE:** average variance extracted; **ASV:** average shared variance; **MSV:** maximum shared variance.*

The theoretical model was tested with Structural Equation Models (SEM) in AMOS software. The initial measurement model contained the items shown in Table 2.2. The treatment was represented with a dichotomous variable (1= exposure to JB), as suggested by Bagozzi and Yi (1989) and illustrated by Arbuckle (2013). Since similarity between senior and junior brands could only be measured for treatment groups, its items were included as interaction terms, taking the value of zero for control groups. Furthermore, for this reason, the covariance between exposure and latent variable similarity was not set to zero, but freed.

5 Results

5.1 Manipulation Checks

A check for the manipulation of similarity showed there was no statistically significant difference among most of the similarity levels. Although the four SBs were the most used brands in their respective product categories, they showed different levels of familiarity (M_{Rexona}=4.59; $M_{Coca\text{-}Cola}$=6.04; M_{BIC}=6.44; $M_{Colgate}$=6.51; F_{BRAND}=65.6; p=0.000). In order to avoid a range restriction problem (Aguinis, 1995), similarity and familiarity were not categorized (low/high), but included as interval variables in the structural model.

5.2 Common Method Variance (CMV)

CMV was analyzed with the widely used technique of marker variable (mv) (Williams et al., 2010), with a *post hoc* correlation as a reasonable and conservative proxy of the

common variance (Lindell and Whitney, 2001). Then, the CMV-adjusted correlations between the variables investigated and their significance were calculated (Lindell and Whitney 2001; Malhotra et al. 2006). After this procedure, 2 of the 273 statistically significant correlations (less than 1%) became not significant, demonstrating that CMV is not an issue in the data.

5.3 Normality Checks

All variables exhibited levels, either for skewness or kurtosis, significantly different from zero, according to critical ratios (C.R.). Mardia's coefficient showed severe multivariate kurtosis (*Mardia*= 151.46; *C.R.*=63.41; $p<0.01$). Lack of multivariate normality is problematic, since it inflates the Chi-square statistic (Hair et al., 2010) and underestimates standard errors, so erroneous significant relations may be found in the model. Yuan and Bentler (1997) suggest paying attention to estimation methods which are valid under non-normal data, since real data are seldom normal. In this sense, the bootstrapping method was preferred to maximum likelihood (ML) estimation and robust standard errors (adjusted by excess of kurtosis), based on Nevitt and Hancock's (2001) findings. Asymptotically free-distribution (AFD) method was discarded since it requires impractical large sample sizes (Hair et al. 2010; Muthén 1993). The bootstrap technique with 5000 repetitions (Andrews and Buchinsky, 2002) was chosen in order to obtain standard errors and bias-corrected confidence intervals for parameters.

5.4 Measurement Model

The initial run suggested that some of the items should be removed from the analysis because of low factor loadings (2 items from AWA, 1 from ASSO and 1 from PQU). Composite Reliability (CR) was calculated to assess the reliability of the measurement of

each construct, with a threshold value of 0.70 (Hair et al., 2010). Average Variance Extracted (AVE) by the latent construct should exceed 0.50 for convergent validity and should be greater than Average Shared Variance (ASV) and (more strictly) Maximum Shared Variance (MSV) to reflect discriminant validity (Fornell and Larcker, 1981). Reliability of ASSO (CR=0.69) and convergent validity of AWA (AVE=0.473) are slightly below their thresholds. Discriminant validity of all the constructs is adequate, taking the ASV as a reference (Table 2.2).

As N increases above 200, Chi-square has a tendency to reject models, indicating significant differences between the proposed model and the sample covariance; while for sample sizes below 100, the test usually does not find significant differences, even when none of the proposed structural relationships is significant (Hair et al. 2010; Schumacker and Lomax 2004). Bollen-Stine p-value obtained from bootstrapping is also sensitive to sample size, showing low values, as Chi-square's p-value does (Hartmann, 2005). Considering the large sample used in this study (N = 617), other measures were observed: CMIN/df, GFI, AGFI, CFI and RMSEA. Analyzing these indicators, the measurement model has an adequate fit (*Chi-square*=616.27; *df*=137; *p*=0.000; *CMIN/df*=4.498; *GFI*=0.90; *AGFI*=0.862; *CFI*=0.942; *RMSEA*=0.075). Table 2.3 shows some descriptive statistics for the study constructs. The statistics by brand show that Colgate has the highest valuation in all BE dimensions, while Rexona has the lowest.

Table 2.3. Correlations and Descriptive Statistics for the Study Constructs

		AWA	ASSO	PQU	LOY	OBE	FAM	SIM
Awareness		1						
Associations		0.671**	1					
Perceived quality		0.646**	0.512**	1				
Loyalty		0.556**	0.489**	0.703**	1			
Overall brand equity		0.497**	0.441**	0.599**	0.726**	1		
Familiarity		0.510**	0.441**	0.457**	0.516**	0.418**	1	
Similarity		0.015	0.067	0.115*	0.178**	0.213**	0.094*	1
Total sample	Mean	5.753	5.560	5.388	4.212	4.277	5.895	
	S.D.	1.244	1.428	1.330	2.023	1.602	1.570	
Colgate	Mean	6.194	6.013	5.885	5.370	4.704	6.510	
	S.D.	0.916	1.011	1.075	1.705	1.553	1.107	
Rexona	Mean	5.089	4.646	4.971	3.247	3.925	4.591	
	S.D.	1.437	1.671	1.321	1.967	1.559	1.821	
Coca-Cola	Mean	5.793	5.808	5.005	3.609	3.905	6.038	
	S.D.	1.186	1.297	1.438	2.019	1.681	1.414	
BIC	Mean	5.939	5.773	5.699	4.639	4.580	6.442	
	S.D.	1.109	1.241	1.210	1.661	1.451	0.977	

Notes: ***Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).*

5.5 Structural Model

Fit measures show an adequate fit of the global model, except AGFI, which rewards parsimony (*Chi-square*=663.679; *df*=168; *p*=0.000; *CMIN/df*=3.95; *GFI*=0.902; *AGFI*=0.866; *CFI*=0.944; *RMSEA*=0.069). The results for the structural model relationships are shown in Table 2.4. Exposure to junior brand (EXPOS) did not affect AWA, giving support to H1a. ASSO, LOY and OBE were negatively influenced by EXPOS, giving support to H2, H4a and H5a, respectively. Dilution of LOY is partially mediated by dilution of ASSO, according to H4b, while dilution of OBE is partially mediated by dilution of LOY (H5c supported). There is no evidence for H3a, since PQU was not affected by EXPOS. Moreover, PQU was not diluted through AWA, nor was it diluted through ASSO. Similarity of junior brands positively influenced three of four BE dimensions (ASSO, PQU and LOY) and OBE, giving support to H6. Familiarity with senior brands influenced (positively) two of five constructs (AWA and LOY).

Summarizing BE dimensions relationships, positive influences of AWA over ASSO and PQU, ASSO and PQU over LOY, and LOY over OBE, were found. The regression weights of the indicators were all statistically significant.

Table 2.4. Regression weights and bias-corrected confidence interval (95%)

				Bias-corrected 95% CI			
H_0	Parameter	Estimate	SE[a]	Lower	Upper	P	
H1a,b	AWA←EXPOS	0.204	0.139	-0.058	0.486	0.135	
H2	ASSO←EXPOS	-0.322	0.159	-0.653	-0.017	0.035	**
H3a	PQU←EXPOS	-0.316	0.328	-0.976	0.053	0.103	
H4a	LOY←EXPOS	-0.466	0.158	-0.785	-0.152	0.002	***
H5a	OBE←EXPOS	-0.468	0.127	-0.724	-0.23	0.000	***
	AWA←SIM	-0.026	0.044	-0.122	0.055	0.520	
	ASSO←SIM	0.075	0.037	0.007	0.158	0.031	**
H6	PQU←SIM	0.11	0.075	0.027	0.282	0.008	***
	LOY←SIM	0.116	0.043	0.035	0.205	0.004	***
	OBE←SIM	0.066	0.029	0.01	0.124	0.021	**
	AWA←FAM	0.416	0.04	0.336	0.495	0.000	***
	ASSO←FAM	-0.034	0.063	-0.169	0.085	0.573	
Control	PQU←FAM	-0.033	0.111	-0.265	0.092	0.709	
	LOY←FAM	0.198	0.048	0.102	0.291	0.000	***
	OBE←FAM	-0.007	0.032	-0.069	0.057	0.823	
BE relations:							
	ASSO←AWA	1.217	0.125	0.997	1.497	0.000	***
H3b	PQU←AWA	1.351	1.024	0.729	3.58	0.002	***
H3c	PQU←ASSO	-0.228	0.735	-2.115	0.164	0.309	
H4b	LOY←ASSO	0.298	0.083	0.126	0.456	0.002	***
H4c	LOY←PQU	0.718	0.072	0.572	0.855	0.001	***
H5b	OBE←PQU	0.106	0.058	-0.008	0.221	0.067	*
H5c	OBE←LOY	0.547	0.055	0.443	0.662	0.000	***

Notes: *a. bootstrap standard error; *p<0.10; **p<0.05; ***p<0.01*

6 Discussion

In summary, these results show that dilution operates beyond strength of associations, since attitudinal loyalty and overall brand equity were also diluted. The weakening of associations supports the prediction of the HAM model and the conclusions of previous studies about trademark dilution (Morrin and Jacoby 2000; Morrin et al. 2006; Pullig et al. 2006). It was also evidenced that brand awareness was not affected by the emergence

of junior brands, which can be explained by the fact that junior brand advertising and market exposure could make the brand name salient for consumers (Aaker, 1991), as the senior brand does. Perceived quality, although it depends on the strength of associations, is also supported by the content of associations regarding products attributes and performance. Our results show that junior brands have neither a direct nor an indirect effect on perceived quality. This finding suggests that the content of associations related to brand excellence and performance was not affected. On the other hand, junior brands have direct and indirect effects on loyalty and overall brand equity. These results are similar to those of Choy and Kim (2013), who showed dilution of attitudes and purchase intention due to junior brands. It is interesting to note that attitudes towards the brand and its overall evaluation of added value could be affected by junior brands even if consumers' perception of superior quality is not affected. According to Aaker (1991) and Keller (1993), perceived quality is one of the bases for attitudinal loyalty, but there are other influencers like strength of associations, liking and brand image. That is, perceived quality is a subset of a broader set of associations in the consumer's mind that could be affected by junior brands.

Regarding perceived similarity, it moderated the three dilution situations, and reinforced perceived quality. This result coincides with prior findings that show that dilution diminishes with greater attribute and product category similarity (Morrin and Jacoby 2000; Pullig et al. 2006). On the other hand, although the variation of familiarity among the famous brands used in this study was limited, a positive relation of familiarity with two BE dimensions (AWA and LOY) emerged in the results. Further analysis of covariance to LOY showed that this dimension was diluted in the less familiar brand (Rexona), but not in the others. We did not find an effect of familiarity on the other diluted

dimensions (ASSO and OBE). We think that the weak evidence of the effect of familiarity may be due to the lack of variability of the construct in this sample.

7 Conclusions, Limitations and Further Research

This study represents a step forward in the literature on trademark dilution, in the sense that it analyzes the effects of a junior brand on senior BE dimensions. Most past studies use traditional measures of dilution relating to the strength of associations, but we expanded the scope of the eventual damage caused by junior brands. While awareness is not affected, other constructs such as the strength of associations, the attitude of brand loyalty, and consequently, the overall perception of added value, were diluted. In the case of loyalty, dilution may be due not only to the weakening of associations, but also to the likely deterioration of some beliefs (except perceived quality) about the brand.

In any case, given that brand equity is an antecedent to desirable behaviors in consumers, these results highlight the importance of defending the brand against imitations or unauthorized use. This conclusion holds even though the brands are famous, as is the case with those used in this study. In only one of the dimensions affected by junior brand (loyalty) it was noted that greater familiarity could attenuate dilution; this did not hold up in the other constructs (associations and overall brand equity). Finally, the greatest attention should be given to unauthorized use of the brand in different products or with dissimilar attributes to those that make the brand distinctive.

This study has some limitations. The product categories used belong to “convenience” or “preference” types (Murphy and Enis, 1986), but further studies could test the dilution in "shopping" or "specialty" products where consumers get more involved with the purchase task and, probably, could process the information of senior brands in a different way that

could attenuate the effect of junior brands. Another limitation is the use of undergraduate students in the sample, which limits the generalizability of the findings (Peterson and Merunka, 2014), although Calder et al. (1981) justify the use of student samples in research aimed at theory testing. Despite this limitation, the focus groups and pretests allowed the researchers of this study to choose appropriate brands and product categories for these consumers. Non-students and consumers of other ages would be valuable to increase the generalizability of the results. Regarding the type of imitation, in order to create the junior brands in this study, the senior brand name was used, and the level of similarity to the distinctive aspects of the senior brand was manipulated. Further studies could compare the effects of imitation of other elements of the brand (i.e., logo, packaging, slogan, sounds, etc.) in the same or another product category, in order to have a better understanding of the relative levels of damage derived from various brand elements.

Finally, a useful advance in the topic would be to study the effects of unauthorized use of famous brands on consumer behavior in the marketplace. Pullig et al. (2006) analyze the effect on purchase intention, but there are critics (Tushnet, 2008) that argue that the effects on consumers' minds do not necessarily translate into practical effects on consumer behavior, such as brand purchase.

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9 Appendix 1: Example of visual ads - BIC

Senior brand: BIC pen

Junior brand 1: BIC tablet pen, high attribute similarity

Junior brand 2: BIC tablet pen, low attribute similarity

Junior brand 3: BIC watch, high attribute similarity

Junior brand 4: BIC watch, low attribute similarity

CAPÍTULO III. TRADEMARK DILUTION AND ITS PRACTICAL EFFECT ON PURCHASE DECISION[8]

Abstract

This work aims to analyze the effect of unauthorized use of trademarks on its consumer-based brand equity and on the consumer purchase decision, through a mediation model with structural equations. An experiment was carried out with 618 participants, who were exposed to advertising of famous brand products (senior brands) or fictitious products with the same brands (junior brands) and were then asked to make some purchases with a real budget of US$5. The results show that exposure to junior brands reduces senior brand equity (i.e. results in trademark dilution), and, therefore, reduces the purchase of senior brand products. Allowance was also made for a possible moderating effect of consumer involvement with the product category of the famous brands, but no significant effect was found in this regard. The study aims to contribute to our understanding of trademark dilution, including the effect on purchase decision – a subject so far unexplored in the empirical literature - and to highlight the importance of protecting well-known trademarks in order to avoid damage occurring not only in consumer perceptions, but also in firm's sales and brand financial value.

Keywords: trademark dilution, blurring, brand equity, purchase decision, well-known trademarks.

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1 Introduction

Unauthorized use of a famous brand's distinctive elements, such as its brand name, slogan, logo, package design, etc., could negatively impact the brand that is imitated (senior brand), through cognitive, affective, or behavioral effects on its consumers (Loken and John, 2010). This phenomenon is called trademark dilution and is defined, in a general sense, as a reduction in brand equity due to the emergence of an imitator or unauthorized user (junior brand). Following Simonson (1993), we may distinguish between two types of dilution: typicality dilution and evaluation dilution (also defined as tarnishment). Typicality dilution is understood as the whittling away of the association (in consumer memory) between a senior brand and its product category (Simonson, 1993). For example, the existence of junior brand Hyatt Legal Services, with the same name as senior brand Hyatt Hotels, could reduce consumers' ability to recognize or associate the senior brand with its product category (*Hyatt Corp. v. Hyatt Legal Services*, 1984, cited in Morrin and Jacoby, 2000). Peterson, Smith and Zerrillo (1999) explain the directionality of the associations, and distinguish between typicality, defined as the association from trademark to product category, and dominance, or the association from product category to the trademark. According to Peterson et al. (1999), dominance also represents the extent to which a trademark is present in consumers' evoked sets, given a product category, as well as "the accessibility of a trademark in memory relative to competing trademarks in the product category". Following this line of reasoning, Peterson et al. (1999) extended the concept of typicality dilution to dilution by blurring, understood as a reduction in typicality and dominance. Later authors defined dilution by blurring in a broader sense, as the weakening of the associations between the brand and its distinctive aspects, the latter including not only product category, but also distinctive attributes (Morrin and Jacoby, 2000; Morrin, Lee and Allenby, 2006; Pullig, Simmons and

Netemeyer, 2006). According to this interpretation, dilution by blurring relates to brand positioning in the consumer's mind.

There is greater consensus about dilution by tarnishment, defined by several authors as a negative modification in senior brand evaluation, brought about either because the junior brand has added negative associations to the consumer's mental schema, or because it has negatively modified existing ones (Simonson, 1993; Pullig et al., 2006). Cases of possible tarnishment are Budweiser Laboratories Insecticide (Brauneis and Heald, 2011), or the motto "Enjoy cocaine" presented with the characteristic typography and colors of Coca-Cola (Loken and John, 2010), which could add negative associations to the senior brands Budweiser and Coca-Cola, respectively, in consumer memory.

The empirical literature on trademark dilution has focused on showing how the unauthorized use of famous brands affects the strength and content of associations in consumer memory (Morrin et al., 2006; Pullig et al., 2006; Morrin and Jacoby, 2000). Other studies have demonstrated the negative impact of junior brands on brand personality (Choy and Kim, 2013), on the probability of inclusion of the senior brand in the evoked set (Pullig et al., 2006), and on purchase intention (Pullig et al., 2006; Choy and Kim, 2013). However, Tushnet (2008) criticizes dilution studies, arguing that negative effects at the consumer mind level (beliefs, attitudes, intentions) do not necessarily imply a reduction in real purchase decision, which she terms the "practical effects" of dilution. The theory of planned behavior (Ajzen, 1991) predicts that a behavioral intention positively correlates to action, but such action could be conditioned by a person's perceived control of behavior, understood as that person's confidence or otherwise in her ability to perform the action. For example, a person could have the intention to change the usual brand he purchases to satisfy a need, but may not be

confident he will succeed in finding an appropriate new brand, either because of personal limitations (lack of the skills required to compare alternatives) or environmental restrictions (e.g., time or money). To the best of our knowledge, no study has so far directly analyzed the effect of junior brands on the purchasing of senior brands' products.

From a consumer perspective, the brand equity construct, cited by Simonson in the context of conceptualizing trademark dilution, is defined as the added value with which a given brand endows a product, beyond its functional benefits (Farquhar, 1989). Keller (1993) defines brand equity as the differential effect of brand knowledge on consumers' reactions to the marketing mix of the brand, in comparison to their reactions where the same marketing activities come from an unbranded product or service. Aaker (1991) also gives a definition of brand equity in an incremental sense, as a set of assets (or liabilities) that add to (or subtract from) the value provided by a product or service to its customers. From a theoretical point of view, these authors agree that greater brand equity increases the likelihood of the brand appearing in consumers' consideration sets, and of consumers choosing the brand in a purchase decision situation, among other favorable behaviors (Aaker, 1991; Keller, 1993; Keller and Lehmann, 2006). From this it would appear to follow that any reduction in brand equity due to the emergence of a junior brand could extrapolate to the aforementioned consumer behaviors. With this in mind, the first purpose of this study is to analyze the effect that the emergence of junior brands has on purchase decisions relating to senior brands, mediated by consumer-based brand equity.

A second purpose is to test whether consumer involvement with the senior brand's product category moderates the effect of junior brands on senior brands' equity and purchase decision. Product involvement is the perceived relevance of a product category for a consumer (Coulter, Price and Feick, 2003), in accordance with the consumer's

needs, goals, and values (Nkwocha et al., 2005). According to the Elaboration Likelihood Model (ELM) (Petty, Cacioppo and Schumann, 1983; Petty and Caccioppo, 1984), consumers process the information related to products in different ways, depending on their degree of involvement. This is why involvement is a frequently used moderator in studies about brand loyalty (Bennett, Hartel and McColl-Kennedy, 2005), attitude towards or evaluation of brand extensions (Nkwocha et al., 2005; Dens and De Pelsmacker, 2010), brand country of origin recognition (Martín and Cerviño, 2011), and consumer behavior (Celsi and Olson, 1988; Cooke and Sheeran, 2004). Involvement has also been studied as an influence upon perceived personality fit between extensions and parent brands (Lau and Phau, 2007) and on consumers' attitude towards extensions of luxury brands (Albrecht et al., 2013). Boisvert (2012) studied how involvement mediates the relationship between extensions and parent brands. The next section summarizes the theoretical background for the study and develops its hypotheses.

2 Conceptual Framework and Hypotheses

2.1 Brand dilution and trademark dilution

Loken and John (2010) define brand dilution as the "weakening of positive brand associations, or strengthening/addition of negative brand associations" in the consumer's mind. These authors classify sources of brand dilution as internal or external to the firm. Internal sources of dilution include inconsistent marketing mix actions, like choosing a popular distribution channel (discount stores, gas stations) for an exclusive brand, or overuse of coupons or deals to promote sales, devaluing the brand. In line with the latter example, Srinivasan and Hanssens (2009) summarize that price promotions negatively affect firm value in the long run. Other internal decisions that could lead to brand dilution are: inconsistent or problematic brand alliances, as when Firestone tires on Explorer

vehicles were called into question (Votolato and Unnava, 2006), or inconsistent or failed brand extensions, such as the drop in sales of Pierre Cardin after the extension to baseball caps and cigarettes (Loken and John, 2010). More recently, we have also seen a decline in Volkswagen's brand equity around the world following upon the company's emissions scandal (Boston and Sloat, 2015).

As Loken and John (2010) point out, brand extensions have received great attention in brand dilution literature. The theoretical basis commonly referenced is the Associative Network Model (ANM) (Anderson, 1983; Teichert and Schöntag, 2010), according to which information in consumer memory is stored in networks consisting of nodes (the brand, its attributes, sensations) interconnected by links. These links are known as brand associations, which can vary in strength. When an inconsistent extension is launched by a firm, new associations are created in the consumer's mind, and when the brand name is activated, the original and the new associations compete to activate in the consumer's memory, reducing the strength of the former. This effect is expressed in a reduction in the probability of recovery of the association, or a delay in the retrieving time (Burke and Srull, 1988). As will be seen, something akin to this type of inconsistent "extensions" can be created by a junior brand entering the market.

As for external sources of dilution, these include - among others - activities initiated by the distribution channel, such as retailers' display (Buchanan, Simmons y Bickart, 1999), the organizing of consumer boycotts (Sen, Gurhan-Canli y Morwitz, 2001), or the unauthorized use of trademarks. Examples of unauthorized use of trademarks are product counterfeiting (Green y Smith, 2002; Loken y Amaral, 2010), the use of a famous brand name for the products of another manufacturer, either in the same or in other product category (Morrin y Jacoby, 2000; Morrin et al, 2006; Pullig et al, 2006; Choy and Kim,

2013), private label brands that look like a famous brand, generating confusion among consumers of the latter (Kapferer, 1995), or parodies of the slogan, logo, or some brand element, that affect brand reputation (Anheuser-Busch, Inc. v. Balducci Publications, 1994; cited in Jacoby, 2008). When a brand is diluted because of its unauthorized use by a third party, the phenomenon is known as trademark dilution.

The ANM (Associative Network Model) is also the theoretical model on which trademark dilution literature rests. According to ANM, when a junior brand emerges in another product category with a given set of attributes (similar or not to those of the senior brand), new associations are added to the existing network. When the consumer thinks about the brand, all these associations compete for activation in memory, thereby weakening the senior brand associations by reducing the likelihood or speed of retrieval (Burke and Srull, 1988). Empirical studies in this field show how junior brands reduce senior brands' strength of associations, measured as consumers' accuracy and response time in tests of recognition of associations between the brand name and its distinctive aspects (Morrin et al., 2006; Pullig et al., 2006; Morrin and Jacoby, 2000). Other measures of dilution by blurring include reduction of: brand personality (Choy and Kim, 2013), probability of inclusion of the brand in the evoked set (Pullig et al., 2006), and purchase intention (Pullig et al., 2006; Choy and Kim, 2013).

Regarding moderator variables in dilution studies, it has been shown that similarity between junior and senior brands' product categories (Morrin y Jacoby, 2000; Pullig et al., 2006) and attributes (Pullig et al., 2006) attenuate dilution. Similarity is the level in which product category and attributes between junior and senior brand are perceived alike (Grime, Diamantopoulos and Smith, 2002). Based on the ANM, if there is a high similarity between aspects of the junior and senior brands, these two information

networks become more interconnected (Jacoby, 2001). When consumers think about the brand, the likelihood and speed of recovery of the initial associations may not suffer a reduction in memory, and may even increase, due to higher interconnected nodes (Humphreys, O'Shea and Bolland, 2000; Pullig et al., 2006).

Also, greater familiarity with senior brand (Morrin y Jacoby, 2000; Morrin et al., 2006) and knowledge about its product category (Morrin et al., 2006) reduces dilution. Choy and Kim (2013) found an interaction effect between similarity and familiarity. When consumers are familiar with a senior brand, exposure to the junior brand reinforces the senior brand's personality, regardless the level of similarity. At low familiarity levels, a similar junior brand reinforces the senior brand's personality, while a dissimilar junior brand dilutes personality, lowers consumers' favorable attitude toward the senior brand and consequently decreases purchase intention (Choy and Kim, 2013). On the other hand, confusion regarding the manufacturer of junior and senior branded products reduces the probability of recalling the senior brand's product category, this constituting a particular form of dilution (Morrin et al., 2006).

2.2 Brand equity and consumer behavior

From a consumer perspective, several authors (Farquhar, 1989; Aaker, 1991; Keller, 1993) define brand equity (BE) as the differential perceived value that a branded product offers, when compared to the same unbranded product (whose value is only functional). However, and according to Keller and Aaker, this "overall" brand equity construct (Yoo, Donthu and Lee, 2000) is multi-dimensional in nature. For Keller (1993), consumers' differential reactions toward the brand rely on their brand knowledge, which is based on brand awareness and brand image – a perception about the brand based on a set of associations. Aaker (1991) proposes that brand equity is supported by four dimensions:

awareness, associations, perceived quality, and loyalty. Brand equity literature shows several theoretical links between the brand equity construct, or its dimensions, and consumer purchasing decision.

Awareness is the ability of a potential buyer to recognize or recall that a brand belongs to a certain product category (Aaker, 1991) or satisfies certain needs (Keller, 1993). High brand awareness is a signal to the consumer that the brand has been present a long time in the market and that it has been successful (Aaker, 1991), increasing the likelihood for the brand to be in the consideration set (Aaker, 1991) and to be chosen (Keller, 1993). Associations are links between the brand and attributes, sensations and experiences (Aaker, 1991) that could influence choice when customers are looking for those aspects. Associations serve to form brand image in consumers' minds, and a strong brand image contributes to brand choice (Keller, 1993). There are some important characteristics of associations that have been proved to be of special relevance in dilution studies: uniqueness and strength of associations. As explained by Keller (1993), these characteristics influence the likelihood of associations being retrieved from memory. Perceived quality is the global perception of superiority or excellence of a brand in relation to its competitors (Aaker, 1991; Zeithaml, 1988), which in turn depends on particular attributes of branded products or services. Uniqueness, favorability and strength of associations generate high perceived quality, affection and positive attitude toward the brand (Esch et al., 2006), commitment, and purchase intention (Koll and von Wallpach, 2014).

Associations, including perceived quality, are the cognitive basis for attitudinal loyalty (Oliver, 1997), which is understood as a commitment to consume brand products (Oliver, 1999) or the intention to select the brand as the first choice (Yoo and Donthu, 2001).

According to Aaker (1991), high loyalty is expressed as a low probability of the consumer switching brands. In general, greater awareness, unique, strong and favorable associations, positive image and high perceived quality all allow differentiation of the senior brand among its competitors, and serve as a basis for a greater attitudinal loyalty, which, in turn, translates in a greater probability of brand choice in a purchase decision. Buil, Martinez and de Chernatony (2013) show evidence that greater overall brand equity correlates positively with brand preference and purchase intention, using data from the United Kingdom and Spain.

2.3 Dilution of brand equity and consumer behavior

Following Simonson's definition, dilution relates to brand equity through the weakening or modification of brand associations. The conceptualization of brand equity adopted in this study emphasizes the added value that the brand gives to consumers, in comparison to unbranded products. As explained before, this added value is based on awareness, strength and content of associations, and attitudinal loyalty. Therefore, when the senior brand's associations are weakened and modified because of the emergence of junior brands (Morrin and Jacoby, 2000; Morrin et al., 2006; Pullig et al., 2006), it is also expected that the added value perception might be affected. The above reasoning leads to our first hypothesis:

H1: the emergence of a junior brand dilutes overall brand equity

We have seen that this added value is presumed to generate desirable behaviors in consumers. Consequently, the reduction in brand equity due to emergence of a junior brand could reduce the intention of consumers to purchase a brand and, according to the theory of planned behavior (Ajzen, 1991), could reduce the probability of choosing the

brand in a purchase decision situation. At this point, it is of particular importance to remember that dilution by blurring due to junior brands emerging in different product categories implies a reduction in dominance (Peterson et al., 1999), i.e., a reduction in the accessibility of a trademark in memory relative to competing trademarks, given a product category. Empirical studies have shown evidence in that sense; when imitators dilute brand equity, through the weakening and modification of brand associations, there is also a reduction in probability of inclusion in the consideration set and purchase intention (Pullig et al., 2006; Choy and Kim, 2013). The second hypothesis therefore reads:

H2: the emergence of a junior brand reduces the purchase of the corresponding senior brand, mediated by a reduction in overall brand equity.

2.4 Involvement and dilution

According to Park and Mittal (1985), individuals interested in the attributes of the product and its performance are likely to get "involved" with the task of purchasing the product. According to the Elaboration Likelihood Model (ELM) (Petty et al., 1983; Petty and Caccioppo, 1984), there are two alternative routes to persuasion, and the choice of route depends on the consumer's involvement with the subject - or product - to which the information relates. Applying ELM to the case of information about brands, it can be argued that when there is low involvement with the product category, consumers tend to use the peripheral route, evaluating or forming an attitude about the product based on a superficial analysis of easily accessible and perceptible cues in the stimulus presented. On the other hand, when there is high involvement with a product category, consumers are induced to take the central route, which consists of carefully analyzing the information that they consider to be relevant in forming an attitude; such consumers are, in addition, more likely to counter-argue (Petty et al., 1983, Petty and Caccioppo, 1984).

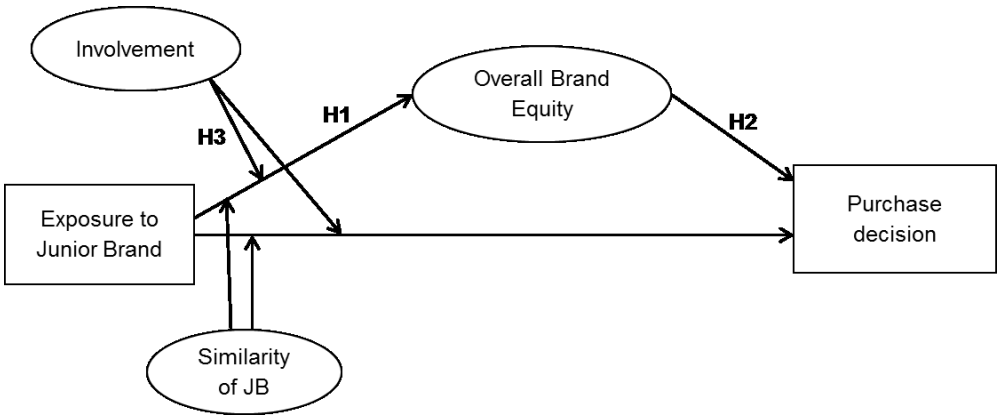
Chandrashekaran and Grewal (2003) explain that, in a high involvement scenario, individuals act according to assimilation-contrast theory. That is, they scrutinize and evaluate the veracity of an advocated message to make an elaborated decision about whether to accept or reject it. Petty et al. (1993) demonstrated that people who were more involved with a product showed greater attitude-intention consistency and were less persuaded by weak arguments for the product, compared with participants who were less involved (Petty, Cacioppo, and Schumann, 1983). An explanation for this finding is that involvement produces attitudes that are based on a greater degree of processing and synthesis of relevant information, which in turn generates more accessible, assured and knowledgeable attitudes, reflected in an increase of attitude-intention consistency (Petty, Haugtvedt, and Smith, 1995).

None of the reviewed trademark dilution studies have used involvement as a moderator variable. Brand extension literature has shown that involvement moderates the relation between fit and attitude towards brand extension (Nkwocha et al., 2005). In high involvement products it was less likely that greater fit correlates with more attitude transfer from parent to extension brand. This result could be interpreted as the consequence of a greater level of consumer analysis occurring in a high involvement scenario. Other studies (Maoz and Tybout, 2002; Nijssen, Bucklin and Uiji, 1995; Dens and De Pelsmacker, 2010) also show that consumers evaluate brand extensions from different involvement levels in different ways. In this sense, it can be argued that in high involvement situations, consumers take the central route in processing information about a junior brand, which includes evaluating its veracity, and, therefore, they are less likely to modify their senior brand mental schema. The third hypothesis therefore reads:

H3: In high product involvement situations there is less dilution, in contrast to low product involvement situations.

Figure 3.1 illustrates the relations among constructs as described here, including similarity as a moderator variable, since most dilution studies have shown this type of effect.

Figure 3.1. Conceptual Model



3 Methodology

The experimental approach allows us to focus analysis on the causal relationships of interest, controlling for other variables involved in the studied phenomenon (Brewer, 2000; Crano and Brewer, 2002). Moreover, as Jacoby (2002) says, in trademark litigation there is a growing demand for controlling plausible explanations of the observed effects. Despite the criticism regarding the artificiality of experimental settings (Babbie, 1998), all the cited dilution studies used experiments to analyze the effect of junior brands on senior brands.

3.1 Preliminary focus groups and tests

Two focus groups (men and women, undergraduates) were completed to select the product categories and senior brands for the main study. Eight product categories were mentioned as the most often used in their daily lives: body soap, hair shampoo, deodorant, toothpaste, dental floss, notebook, pen, and carbonated soft drink. For each product category, tentative levels of involvement and several brands were identified. Then, a pretest involving 59 undergraduates was conducted in order to select: four product categories that differ in involvement; brands most often used for each product category (senior brands); distinctive attributes and dissimilar product categories. Table 3.1 summarizes the selections made for the main study, including proposed attributes for junior brands.

3.2 Sample and procedures for main study

An experimental between-subjects study was conducted to test the study's hypotheses. Two graphic designers prepared visual advertisements for senior, junior and unrelated brands. Junior brands used the same brand name as the senior brand, manipulating the level of category and attribute similarity (low versus high), following the design of Pullig et al. (2006). A total of 618 undergraduate students from a large university in Ecuador were randomly assigned to 1 of the 20 experiment groups (Table 3.2). Each participant was told he or she would receive 5 U.S. dollars ($) to make purchases including at least three product categories, one of which corresponded to the senior brand's product category in his or her experimental group.

Table 3.1. Selected Product Categories, Senior Brands, and Distinctive Attributes

Product categories for senior brand	Level of product involvement	Senior brand (most often used)	Distinctive attributes	High product similarity junior brand	Low product similarity junior brand
Toothpaste	High	Colgate	fresh breath, clean sensation	Buccal spray	Chewing gum
Deodorant	High	Rexona[9]	great scents, high protection	*Eau de Toilette*	Body wipes
Carbonated soft drink	Low	Coca-Cola	unique flavor, refreshes	Juice	Candy
Pen	Low	BIC	inexpensive, high quality	Tablet pen	Watch

Table 3.2. Experimental Design

Control groups (exposure to senior brand)		Treatment groups (exposure to junior brand)			
		Low product similarity		High product similarity	
		Low attribute similarity	High attribute similarity	Low attribute similarity	High attribute similarity
High Involvement (HI)	toothpaste: Colgate	chewing gum (blackberry flavor, colorful smile)	chewing gum (fresh mint flavor, clean sensation)	buccal spray (cinnamon flavor, does not replace brushing teeth)	buccal spray (fresh mint flavor, clean sensation)
	deodorant: Rexona	body wipes (unscented, for the moment)	body wipes (great scents, skin protection)	*eau de toilette* (for kids, kids scent - lavender)	*eau de Toilette* (great scents, long lasting)
Low Involvement (LI)	carbonated soft drink: Coca Cola	candy (lemon/orange flavor, vitamin C)	candy (unique flavor, refreshes)	juice (lemonade, drink it hot or cold)	juice (unique flavor, quenches thirst)
	pen: BIC	watch (sophisticated, not water-resistant)	watch (inexpensive, they never fail)	tablet pen (elegant, low compatibility)	tablet pen (inexpensive, they never fail)

3.3 Measurement of the variables/constructs

First, the participants were shown the visual stimuli (control group: senior brand SB; treatment groups: junior brand JB_1, JB_2, JB_3 or JB_4) and two additional advertisements about unrelated brands. Then, a web-based questionnaire developed on Jotform® was applied, beginning with some demographic questions. Next, the participants were shown a list of products with three brands for each product, from which they had to make the

[9] Known as *Degree* in United States and Canada.

purchase. The selected products were delivered to each participant one week after the purchases were made. Table 3.3 shows the price list of products available for purchase. It is worth mentioning that these prices were set according to market prices, and they allowed participants to buy even the most expensive brands of each required product within the budget constraint. Then, participants were asked questions about overall brand equity (OBE) of corresponding senior brands[10]. Yoo et al. (2000) propose to measure OBE, i.e. the difference in consumer choice between the branded and unbranded product, through the intention to buy or the preference for the famous brand in comparison with a competing brand that shares all brand characteristics, except its brand name (4 items). Similarity questions were asked for participants in the treatment conditions only (exposed to junior brands), using Bhat and Reddy's (2001) scales about perceived product fit (2 items). Product involvement was checked using a purchase decision involvement (PDI) scale (3 items; Mittal, 1995), which emphasizes purchase decision of a product. All items related to OBE, similarity and involvement were measured on seven point-Likert scales (Table 3.4). Items were translated by a professional translator from Ecuador, then checked by a Marketing professor for conceptual equivalence, as suggested by Douglas and Craig (2007), and finally back-translated to English by a professional translator from the United States. Both translators work for the Center for Foreign Languages (CELEX) of the Escuela Superior Politécnica del Litoral (ESPOL) in Guayaquil. The back-translated and original versions of the items showed a high level of coincidence.

[10] For example, all groups that saw the stimulus of toothpaste, chewing gum or buccal spray (first row in Table 2), answered questions about Colgate toothpaste.

Table 3.3. Price lists for the purchase decision task

Groups →	Colgate		Rexona		Coca Cola		BIC	
	Product	Price, $	Product	Price, $	Product	Price, $	Product	Price, $
Required product 1	Soap		Toothpaste		Toothpaste		Deodorant	
	Lux, 110gr	1.00	Colgate, 50ml	0.90	Colgate, 50ml	0.90	Speed Stick, roll on, 30ml	1.40
	Protex, 110gr	1.10	Fortident, 70ml	1.15	Fortident, 70ml	1.15	Rexona, roll on, 50ml	2.50
	Dove, 90gr	1.45	Oral-B 123, 75ml	1.65	Oral-B 123, 75ml	1.65	Dove, roll on, 50ml	2.85
Required product 2*	Toothpaste		Deodorant		Carbonated soft drink		Pen	
	Oral-B 123, 75ml	1.65	Speed Stick roll on, 50ml	2.30	Tropical, 500ml	0.60	Pelikan Pointec	0.30
	Colgate, 100ml	2.00	Rexona, roll on, 50 ml	2.50	Coca Cola, 500ml	0.70	BIC Cristal	0.40
	Fortident., 100ml+40%	2.50	Dove roll on, 50ml	2.85	Sprite, 500ml	0.70	Faber Castell	0.40
Required product 3	Pen		Pen		Deodorant		Soap	
	Pelikan Pointec	0.30	Pelikan Pointec	0.30	Speed Stick roll on, 30ml	1.40	Lux, 110gr	1.00
	BIC Cristal	0.40	BIC Cristal	0.40	Sutton, stick, 45 cc	2.05	Protex, 110gr	1.10
	Faber Castell	0.40	Faber Castell	0.40	Rexona roll on, 50 ml	2.50	Dove, 90gr	1.45
Additional products	Tortolines (plantain chips)	0.45	Tortolines (plantain chips)	0.45	Tortolines (plantain chips)	0.45	Tortolines (plantain chips)	0.45
	Ruffles (potato chips)	0.45	Ruffles (potato chips)	0.45	Ruffles (potato chips)	0.45	Ruffles (potato chips)	0.45
	Trident (chewing gum)	0.45	Trident (chewing gum)	0.45	Trident (chewing gum)	0.45	Trident (chewing gum)	0.45
	Manicho (chocolate)	0.40	Manicho (chocolate)	0.40	Manicho (chocolate)	0.40	Manicho (chocolate)	0.40
	Galak (white chocolate)	0.40	Galak (white chocolate)	0.40	Galak (white chocolate)	0.40	Galak (white chocolate)	0.40

** senior brand product category*

Table 3.4. Items for the study constructs

Item		Scale	Factor loadings
Overall Brand Equity (OBE) (Yoo et al., 2000):			
Cronbach's α=0.829			
obe1	It makes sense to buy X instead of any other brand, even if they are the same	(1=Totally disagree - 7=Totally agree)	0.720
obe2	Even if another brand has same features as X, I would prefer to buy X		0.803
obe3	If there is another brand as good as X, I prefer to buy X		0.713
obe4	If another brand is not different from X in any way, it seems smarter to purchase X		0.718
Similarity (SIM) (Bhat and Reddy, 2001):			
Cronbach's α=0.947			
sim1	(junior brand product category) and (senior brand product category) are similar	(1=Totally disagree - 7=Totally agree)	0.951
sim2	(junior brand product category) is like (senior brand product category)		0.946
Involvement (Mittal, 1995):			
Cronbach's α=0.839			
inv2	In selecting from the many types and brands of (product) available in the market, would you say that:	(1=I would not care at all.. - 7=I would care a great deal..) as to which one I buy	0.884
inv2	How important would it be to you to make a right choice of this product?	(1=Not at all important - 7=Extremely important)	0.903
inv3	In making your selection of this product, how concerned would you be about the outcome of your choice?	(1=Not at all concerned - 7=Very much concerned)	0.832

3.4 Methods for data analysis

After data collection, 1 questionnaire was removed because of incomplete responses and data from 617 participants were used (Female= 60.5%; $Mean_{AGE}$=20.98; SD=2.73), with group sample sizes ranging from 30 to 34. Hypotheses were tested using a structural equation model in AMOS, with a dichotomous variable as dependent variable, created in order to represent purchase decision (PURCH). The variable took the value of one when the participant bought the senior brand, and zero otherwise. AMOS uses a probit model for categorical outcomes. The Bayesian analysis with the Markov Chain Montecarlo (MCMC) tool is needed when fitting the probit model in AMOS (Arbuckle, 2013). Exposure to the junior brand (EXPOS) was, also, represented with a dichotomous

variable, which took the value of one when the participant was assigned to a treatment group, following Arbuckle (2013) and Bagozzi and Yi's (1989) suggestions. Since similarity (SIM) between senior and junior brands could only be measured for treatment groups, its items were included as interaction terms, taking the value of zero for each observation belonging to control groups, thus allowing to test the moderating effect of similarity on the relationships between EXPOS→OBE, and between EXPOS→PURCH. For this reason, the covariance between exposure and similarity was not set to zero, but freed. Finally, a two groups approach was conducted in order to test the moderator effect of involvement (low versus high).

4 Results

4.1 Checks

The dependent variable, purchase decision, was measured with a different method (purchase order) than that used for independent variables (Likert scale items), in order to avoid common-method variance issues. On the other hand, check for the manipulation of product involvement showed significant differences (ANOVA one way F_{BRAND}= 32.353; p-value=0.000), with two levels of involvement: Colgate and Rexona together ($\bar{X}_{Colgate}$=16.78; $\bar{X}_{Rexona}$=17.56; $p_{TukeyHSD}$=0.195), and Coca-Cola and BIC together ($\bar{X}_{BIC}$=14.16; $\bar{X}_{CocaCola}$=14.91; $p_{TukeyHSD}$=0.220). There was no statistically significant difference among most of the similarity levels. In any case, similarity was not used as a categorical variable to separate the sample in groups, but it was used as an interval variable.

4.2 Measurement Model

Similarity and overall brand equity are the two latent constructs that were used to establish paths in the structural model, so the measurement model includes only these two constructs. The other variables are exposure to junior brand (dichotomous), purchase decision (dichotomous) and involvement (used forward for a multi-group analysis). Measurement model fit was not assessed with Chi-Square, since this statistic tends to reject models with large sample sizes (>200) (Hair et al, 2010). Checking other set of indicators, the level of fit is adequate (CMIN/df=4.822; GFI=0.977; AGFI=0.947; CFI=0.982; RMSEA=0.079). Construct reliability was assessed with Cronbach's α, showing levels above the suggested threshold of 0.70 (Hair et al., 2010) for the two constructs (Table 3.4). Finally, correlation between the constructs is low ($\rho_{SIM,OBE}$=0.112), showing discriminant validity.

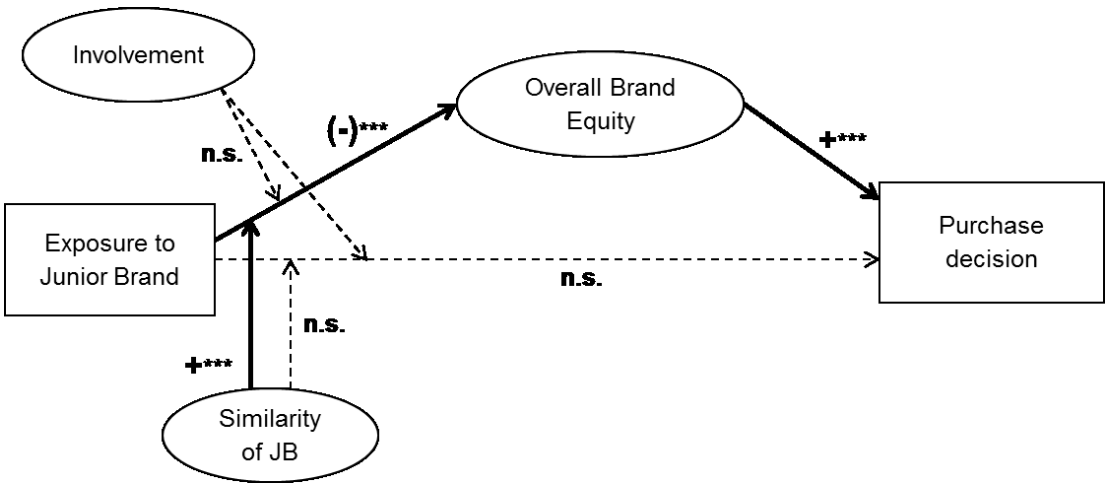
4.3 Structural Model

Figure 3.2 illustrates the empirical model tested in AMOS. The model includes the partial and total mediating effect of OBE in the relationship EXPOS→PURCH. As explained previously, purchase decision is operationalized with a two-category variable. If variables are dichotomous, it is necessary to impose additional parameter constraints in order to make the model identified (Arbuckle, 2013). If the two-category variable is endogenous (as is the case with purchase decision), the MCMC algorithm performs best when the variable's error variance is fixed at a constant (Arbuckle, 2013), therefore, variance for PURCH's error was fixed at 1.

Since a probit model is tested, the regression weights towards PURCH are interpreted as effects of one unit change in corresponding independent variables on the probability that

the consumer purchases the senior brand. MCMC output for the probit model is showed in Table 3.5. Exposition to the junior brand dilutes OBE (β= -0.901; C.R.= -4.844; p-value<0.001), moderated by similarity (β=0.206; C.R.= 4.578; p-value<0.001), while OBE relates positively to purchase decision probability (β= 0.109; C.R.= 3.633; p-value<0.001). OBE completely mediates the dilutive effect of the junior brand on purchase decision probability, since the coefficients from EXPOS and SIM to PURCH are not statistically significant. The signs of path coefficients are the same in both involvement conditions (low and high) and there are no significant differences between path coefficients of the two groups. Further analysis shows that, in low involvement conditions, there is a medium effect size, while in high involvement conditions, there is a small effect size over PURCH, according to Cohen (1992) thresholds (Table 3.6). Finally, all factor loadings are significant[11].

Figure 3.2. Empirical Model



Notes: *involvement was used for a multi group analysis; - - no significant relations;* → *significant relations*

[11] An alternative model using familiarity as a control variable was tested. There were not changes in actual conclusions. Familiarity showed positive relations with OBE and PURCH.

Table 3.5. Coefficients and test for difference between groups

	Total sample				Low Involvement (LI)				High Involvement (HI)							
Parameter	Estimate	S.E.	C.R.		Estimate	S.E.	C.R.		Estimate	S.E.	C.R.		Difference (HI-LI)	S.E.	C.R.	
OBE←SIM	0.206	0.045	4.578	***	0.176	0.063	2.794	***	0.256	0.067	3.821	***	0.080	0.092	0.870	
OBE←EXPOS	-0.901	0.186	-4.844	***	-0.763	0.293	-2.604	***	-0.966	0.246	-3.927	***	-0.203	0.383	-0.531	
PURCH←OBE	0.109	0.03	3.633	***	0.237	0.062	3.823	***	0.157	0.05	3.140	***	-0.080	0.080	-1.004	
PURCH←SIM	-0.01	0.029	-0.345		-0.036	0.049	-0.735		-0.008	0.049	-0.163		0.028	0.069	0.404	
PURCH←EXPOS	-0.024	0.124	-0.194		-0.085	0.223	-0.381		-0.031	0.178	-0.174		0.054	0.285	0.189	
obe4←OBE	1.036	0.065	15.938	***	0.968	0.081	11.951	***	1.112	0.11	10.109	***	0.144	0.137	1.054	
obe3←OBE	0.987	0.066	14.955	***	0.867	0.084	10.321	***	1.17	0.112	10.446	***	0.303	0.140	2.164	**
obe2←OBE	1.113	0.07	15.900	***	0.968	0.085	11.388	***	1.342	0.12	11.183	***	0.374	0.147	2.543	**
obe1←OBE	1				1.000											
sim2←SIM	0.926	0.032	28.938	***	0.964	0.042	22.952	***	0.879	0.046	19.109	***	-0.085	0.062	-1.365	
sim1←SIM	1				1.000											

*Notes: * p<0.10; ** p<0.05; *** p<0.01*

Table 3.6. Fit calculations

	Involvement	
	Low	High
Implied variance for PURCH	1.242	1.078
Error variance[a]	1.000	1.000
Pseudo-R^2	0.195	0.072
Effect size	0.242	0.078
	medium[b]	small[b]

Notes: a. model restriction; b.Cohen (1992)

5 Discussion

The evidence shown above gives support to H1, which means that junior brands reduce the overall perception of added value for senior brands' consumers. Results also show that greater perceived product similarity reduces dilution. These results agree with previous literature that demonstrates there is a dilutive effect of imitators, but that this effect is reduced when consumers perceive greater similarity between junior and senior brand products (Pullig et al., 2006; Morrin and Jacoby, 2000). A more relevant finding from this study is that purchase decisions favoring senior brands are also affected by the emergence of junior brands. This demonstrates that the negative effect in consumers' minds translate into a negative behavioral effect (Loken and John, 2010), answering Tushnet's question of whether trademark dilution generates a practical effect, beyond the effect in consumers declared intentions. According to this study's results, the reduction in purchase behavior is mediated by the reduction in overall brand equity, confirming H2.

Finally, there was no evidence for H3. The multi-group analysis and the test for difference in path coefficients did not find significant differences between low and high involvement samples. If involvement is indeed a moderator, a possible explanation for its lack of significance here could be a lack of variability in the variable, or a range restriction problem (Aguinis, 1995). Although two levels of product involvement were used in this study, these product categories belong to "convenience" or "preference" types (Murphy and Enis, 1986), which could relegate them to a low involvement level among a broader classification that includes "shopping" and "specialty" products.

6 Conclusions, limitations and suggestions for future research

This study contributes to the expanding trademark dilution literature regarding behavioral effects on the consumers of famous brands deriving from the unauthorized use of such brands by third parties. The study shows a negative effect on purchase behavior mediated by a negative effect on consumer-based brand equity, reflected in a reduction in overall evaluation of the perceived added value with which the senior brand invests its products. Two limitations of this study should be considered. First, the use of undergraduate students in the experiment reduces the generality of the results. However, the study's validity is strengthened by the careful selection of products and brands more often used by this sample. Future research could analyze if this effect holds when other types of consumers are used. Second, products permitting higher levels of involvement, such as electronics and appliances, would need to be used in order to effectively test whether the level of involvement moderates trademark dilution, as was hypothesized here.

Finally, these results have implications for management and for public institutions involved in trademark protection. Trademark protection against unauthorized use of brands is a legitimate concern of a company, not only because of the effects at the level of consumers' minds, but also because of the impact over purchase decision, and, consequently, over the firm's cash flow and value. Managers should frequently use BE-related metrics in order to detect erosion of consumers' associations, attitudes, intentions and behavior, due to internal or external activities. Additionally, further research should explore how the effect shown in consumer behavior persists over time, in order to model the longer-term impact of trademark dilution on a firm's value.

From a legal perspective, and given the fact that well-known and famous brands are powerful intangible assets for companies and consumers, the international legal

framework[12] calls for special treatment for so-called "well-known trademarks", in the form of an extra scope of protection afforded to famous trademarks. In this respect, the results of this study support the increasing pressure from the legal community and public institutions to reinforce trademark laws in relation to the protection of famous brands. Unlike ordinary trademark law, dilution protection extends to trademark uses that are not necessarily likely to confuse consumers regarding the manufacturer of the product. Instead, dilution protection law aims to protect sufficiently famous and well-known trade marks from losing their singular association in the mind of the public with a particular product, which ultimately affects overall brand equity and brand financial value.

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[12] Article 6 Bis of the Paris Convention for the Protection of Industrial Property, Article 16(3) of the Agreement on Trade-Related Aspects of Intellectual Property Rights – TRIP; and Trademarks Directive (89/104/EEC) and in the Community Trademark (CTM) Regulation 40/94.

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CAPÍTULO IV. AN EMPIRICAL ASSESSMENT OF DILUTION BY TARNISHMENT: BRAND EVALUATION, INTENTIONS, BRAND EQUITY AND PURCHASE DECISION.[13]

Abstract

Dilution by tarnishment is a phenomenon in which an unauthorized user (junior brand) of a famous trademark adds undesirable associations to the famous brand in the consumers' minds, or negatively modifies the existing ones. According to a consumer-based brand equity theoretical perspective, tarnishment affects consumer attitudes and behavior towards the brand, eroding its value. Taking an experimental approach applied to a sample of 245 undergraduates, this study shows that famous brands' evaluation, brand equity dimensions and purchase decision were not significantly affected by junior brands (JB). However, according to a methodology suggested by Jacoby for trademark litigation, consumption and purchase intention were reduced in two of the four famous brands that were tested. A structural model confirmed the absence of dilution and showed a positive relationship between brand equity and brand purchase. A branch of Heider's Balance Theory and also the subtyping model could explain why supposedly tarnishing JBs may not affect famous brands. These results add to the debate regarding whether a trademark anti-dilution law is necessary to protect famous trademark holders from losing brand value, and highlights the importance of field research in trademark litigation.

Keywords: trademark dilution, tarnishment, consumer-based brand equity, brand value.

[13] Manuscrito en revisión final de estilo y traducción de las fotografías e imágenes utilizadas al inglés, para ser enviado al Journal of Public Policy and Marketing.

1 Introduction

Among the most severe kinds of unauthorized use of famous trademarks (senior brands) are those that cause dilution by tarnishment (Long, 2006). According to Simonson (1993), trademark dilution is, in a general sense, a reduction in brand equity due to the unauthorized use of the trademark by third parties (junior brands). When a junior brand causes a weakening of senior brand associations, it is called dilution by blurring (Simonson, 1993; Peterson, Smith and Zerrillo, 1999). On the other hand, dilution by tarnishment is caused when a junior brand adds negative associations to a senior brand mental network, or modifies the positive ones, negatively affecting the brand evaluation (Simonson, 1993), attitudes and desired behavior of consumers (Jacoby, 2001).

The brand is recognized as a set of product or service identifiers i.e. words, phrases, logos, product configuration (also known as trade dress), colors, sounds and scents, which identify a person or entity's goods or services (Aaker, 1991; Kotler, 1991; Long, 2006). Once an identifier, or a combination of them, is legally registered, it is known as a trademark that is protected by intellectual property rights. This article will refer to any product or service identifier (individually or combined) as a trademark or brand.

Trademark dilution is a topic focused on famous brands, but there is no a straightforward definition of "famous". Instead of famous brands, the World Intellectual Property Organization (2000) defines a well-known brand in terms of several considerations, such as the degree of recognition in the relevant sector of the public, the value of the brand, the geographical area of use of the brand, the geographical reach of advertising and promotions, amongst others. The U.S. Trademark Dilution Revision Act of 2006 (TDRA) states that a brand is famous "if it is *widely* recognized by the general consuming public of the United States as a designation of source of the goods or services of the mark's owner" (emphasis added), and then also gives a set of considerations a court should

observe for determining the requisite degree of recognition. For the purpose of this study, famous brands are brands that are among the most used and recalled by consumers, within a product category.

Reconciling conceptualizations of several authors (Aaker, 1991; Farquhar, 1989; Keller, 1993), this study defines brand equity from a consumer perspective as the perceived added value that a brand gives to a product, when compared to the same unbranded product. Consumer perceived added value is characterized by positive reactions towards the brand, such as buying more branded products, the willingness to pay price premiums and positive word of mouth. Although Aaker and Keller propose different multidimensional conceptualizations for brand equity, they concur that awareness and associations are pillars for building brand equity, something also shared by Simonson (1993), when explaining the process by which trademarks dilute. Associations represent the links between the brand and product attributes, sensations or experiences (Aaker, 1991), and these associations could vary in favorability, uniqueness and strength (Keller, 1993). Precisely, when understanding tarnishment as an injury to the beliefs and feelings that consumers hold regarding a senior brand (i.e. associations), it can be argued that the harm could extrapolate to how consumers intend to behave toward that brand e.g. reducing their purchase intention or increasing the possibility of negative word of mouth (Jacoby, 2008).

Trademark dilution has received attention from the legal, managerial and psychological points of view. There is a debate in the literature, especially among authors in the legal area, on whether the anti-dilution law is necessary or not to protect famous trademarks. As Dworkowitz (2011) summarizes, those who favor the anti-dilution law have been unable to clarify why this law is necessary. Although, since the law's conception in the U.S., Schechter has mentioned a concern which reflects the assumption that the loss of

brand's distinctive power would result in a reduction of sales and, consequently, brand value (Schechter, 1927, as cited in Dworkowitz, 2011), that is, that economic damage would have motivated the anti-dilution law. The brand equity literature supports the assumption that an injury to associations translates into economic harm through a reduction in the branded product's purchase. A more detailed chain of effects, before the hypothetical harm to brand sales, will be discussed in the next section.

On the other hand, those who are against the law consider that the harm posed by many of the examples of supposed dilutive products (e.g. Kodak pianos, Buick aspirin) is non-existent or, even if some negative effect exists over associations, it does not necessarily imply a reduction of purchase behavior in the marketplace. Therefore, they argue that legal protection is not justifiable (Moskin, 1993) under a theory of economic harm, and demand the expansion of trademark dilution studies beyond associations (Magid, Cox and Cox, 2006; Steckel, Klein and Shusshein, 2006; Tushnet, 2008). There are, at least, two theories about behavior that support this thinking. The theory of planned behavior (TPB) (Ajzen, 1991) predicts that a behavioral intention positively relates to action, but action could be conditioned by a person's perceived behavioral control (PBC), understood as his/her perception of the ease or difficulty of performing the behavior of interest. PBC relates to a person's perceived ability to perform an action, and also to the perceived environmental obstacles (Ajzen and Madden, 1986). For example, a person could have the intention to change the usual brand he purchases to satisfy a need, but may not perceive he will succeed finding a new brand, or may perceive some restrictions, such as time, information, money or lack of alternatives from which to choose an appropriate new brand. On the other hand, Leibenstein (1976) introduced the economic concept of inertia areas to explain why some individuals who are used to be in an effort position do not move to a new position "even though there may be a gain achieved thereby" (p190). The

shift will only occur if the perceived gain is greater than the cost of moving from one effort position to another. For example, a consumer may keep purchasing a brand, even if he realizes it is not as good as before, if he perceives that the benefits from switching from the actual to a new brand do not exceed the effort of searching and evaluating new brands.

As Dworkowitz (2011) summarizes, existing dilution studies have been criticized for not going deep enough into simulated real world purchase behavior so there is an evident gap regarding the study of the dilutive effects of junior brands on senior brand sales in order to conclude whether there is proof of economic harm. The purpose of this study is to analyze how junior brands affect senior brand evaluation, consumer attitudes, consumer-based brand equity and purchase decision, controlling by brand familiarity. Brand familiarity is the extent of a consumer's direct or indirect experience with a brand (Alba and Hutchinson 1987; Kent and Allen 1994) and it reflects the consumers' brand knowledge stored in their memory (Campbell and Keller, 2003; Cian, Krishna and Schwarz, 2015). According to past studies (Morrin and Jacoby, 2000; Pullig et al., 2006), more familiar brands are less likely to be diluted because consumers' knowledge structure about the brand is more stable (Choy and Kim, 2013). Since existing empirical dilution studies focus on cases of blurring, this study focuses on potential tarnishment cases. Specifically, to delimit the scope of this article, the cases presented for the study of dilution relate to the use of identical or similar identifiers in different product categories (e.g. Coca-Cleaner). This study should enrich the trademark dilution literature and bring more elements to the current debate regarding the level of harm that junior brands represent for senior trademark holders. Whether the junior brand creates confusion for consumers, regarding the source of branded products, is not considered in this study since

dilution can occur with or without the presence of confusion (Morrin et al., 2006; Simonson, 1993).[14]

2 Conceptual framework

2.1 Associative Network Model and tarnishment

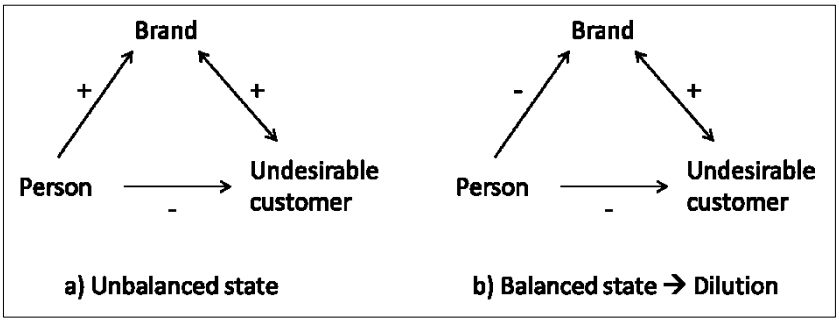
According to the Associative Network Model (ANM) (Anderson, 1983; Teichert and Schöntag, 2010), information in the consumer's memory is stored in networks consisting of nodes (e.g. a senior brand and its distinctive aspects, such as product category and attributes, beliefs, sensations, etc.) connected by links (associations). When a junior brand emerges in another product category with some attributes (similar or not to those of the senior brand), new associations are added to the existing network or actual associations could be modified. When the consumer thinks about the brand, all associations compete for activation in the memory thereby weakening (i.e. blurring) the senior brand associations by a reduction in the likelihood or speed of retrieval (Burke and Srull, 1988). Tarnishment occurs when these new associations are negative or unwanted, affecting senior brand evaluation and perceived quality (Simonson, 1993). This transferring of evaluation from junior to senior brand could occur even if the consumer is not confused about whether the two brands are the same because of the similarities between the brands (e.g. brand name and logo similarities) (Simonson, 1993).

[14] Moreover, the U.S., the Trademark Dilution Revision Act of 2006 states that dilution could occur "*regardless of the presence or absence of actual or likely confusion*".

2.2 Balance theory and tarnishment

Heider's Balance Theory (HBT) was suggested by Zaichkowsky (2007) as a complimentary explanation of why consumers might erode their attitudes towards a brand in a context in which other (undesirable) customers use a clothing brand. An unbalanced state, from the point of view of the consumer of the brand (person), is illustrated in figure 4.1a. A person likes a brand (person$\rightarrow^{+}$ brand), but when a group of customers with some "undesirable" characteristics[15] (person$\rightarrow^{-}$ undesirable customers) use the brand, new associations are attached to the brand (brand$\leftrightarrow^{+}$ undesirable customers), generating tension. One of the psychological defense mechanisms the person performs is to change his attitude or behavior regarding the brand (figure 4.1b), thus, diluting the brand. However, other reactions could occur to reduce tension and achieve balance: categorizing new customers as an exception (convincing him/herself that new customers are not typical customers of the brand) or changing the stereotypes regarding these customers. In both situations, no change in attitudes towards the brand is expected.

Figure 4.1. Dilution by undesired costumers (Zaichkowsky, 2007)

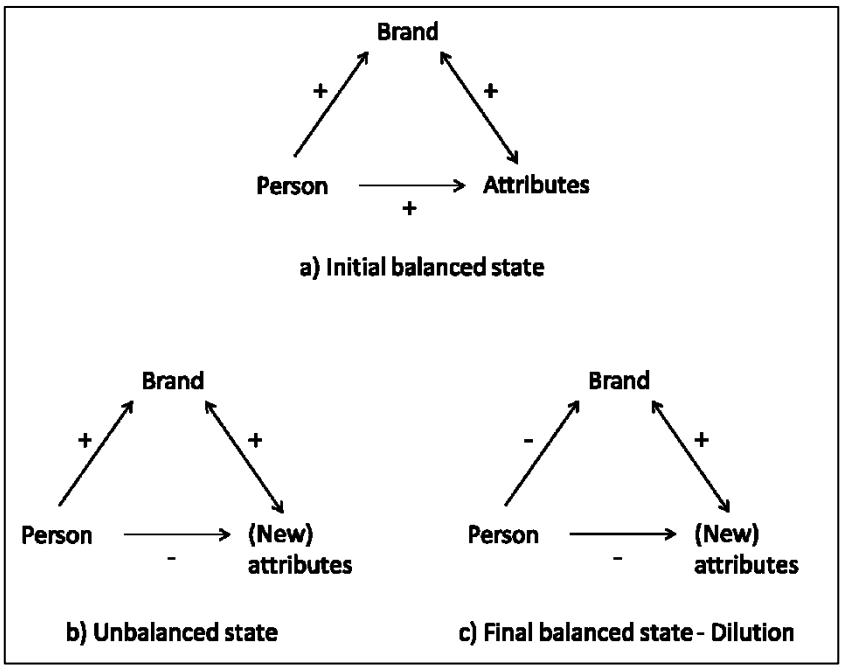


Woodside and Chebat (2001) present some examples of the HBT in a person-brand-attributes triad. Attitudes towards a brand could change because of new undesired associations. A person associates a (senior) brand with some distinctive aspects (Figure

[15] Status, cultural or other characteristics.

4.2a). Considering that tarnishment cases typically relate to unsavory or unwholesome products or services, parodies or criticism (Long, 2006; Bradford, 2008), the emergence of junior brands with these characteristics create undesirable associations (unsavory product category, undesirable attributes) i.e. an unbalanced state for the consumer of the senior brand (Figure 4.2b). According to the HBT, one of the possible reactions of the consumer is to negatively change the attitudes regarding the senior brand i.e. dilution by tarnishment (Figure 4.2c). As Woodside and Chebat (2001) explain, when tension caused by imbalance arises in the consumer's mind, then the consumer is likely to exercise some mental and physical effort to eliminate the tension. Besides changing attitudes towards the brand, other ways to solve the imbalance are: (1) to deeply analyze the information regarding the junior brand and to recognize it is unrelated to the senior brand, breaking the unit between the senior brand and new attributes; and (2) to start liking the new attributes (which seems to be less plausible).

Figure 4.2. Dilution by undesirable attributes (adapted from Woodside and Chebat, 2001)



2.3 Dilution of brand equity: hypothesis development

2.3.1 Brand equity dimensions

Aaker's (1991) multidimensional conceptualization of brand equity (BE) is the most widely used, according to several authors (French and Smith, 2013; Christodoulides and de Chernatony, 2010; Buil, de Chernatony and Martínez, 2008, 2013). This study uses Aaker's four consumer-based dimensions of BE because this framework represents a hierarchical set of effects of junior brand over senior brand equity: awareness, strength of associations, perceived quality and attitudinal loyalty.

Brand name awareness (AWA) is the extent to which the brand name is salient in the consumer's memory and belongs to a product category (Aaker, 1991). Stronger brand awareness works as a heavier anchor to which other associations are attached (Aaker, 1991; Keller, 1993). Junior brands use the same or similar brand names, and other identifiers, to introduce products, services or to parody senior brands. Thus, salience of the brand is not expected to be affected by junior brands. However, according to the HAM model, the link to the senior brand's product category could be weakened because of the new link with the junior brand's product category. Since the overall effect on awareness is uncertain, the following bi-directional hypothesis is postulated:

H1a: exposure to the junior brand does not reduce the senior brand's awareness.

H1b: exposure to the junior brand reduces the senior brand's awareness.

The strength of associations (ASSO) relates to the likelihood of being retrieved from memory (Keller, 1993). As stated before, the HAM model predicts a weakening of the existing senior brand's associations because of the adding of new associations (junior brand's aspects) that compete for activation with the formers. Thus, it is hypothesized that:

H2: exposure to the junior brand reduces the senior brand's strength of associations.

Perceived quality (PQU) is the global perception of superiority or excellence of a brand related to its competitors (Aaker, 1991; Zeithaml, 1988). It is an overall evaluation that depends on a particular set of associations: attributes of branded products and performance. It is also argued that high brand awareness is a quality signal for the consumer (Jacoby, Olson and Haddock, 1971), since it might mean that the brand has been present a long time in the market and that it has been successful (Aaker, 1991). Considering that associations could vary in strength and this strength relates to the likelihood of being retrieved from memory, the perception of quality may be less salient as the underlying associations are weakened. Moreover, regarding hypothetical tarnishing junior brands, new irrelevant, undesired or negative associations added to the senior brand network could affect the overall perception of superiority or excellence. Therefore, it is proposed that:

H3a: exposure to the junior brand reduces the senior brand's perceived quality
H3b: awareness mediates the effect of the junior brand on perceived quality.
H3c: the strength of associations mediates the effect of the junior brand on perceived quality.

In the higher level of BE dimensions is attitudinal loyalty (LOY), a commitment to buy a brand (not a product) (Oliver, 1999), that depends on liking, past satisfactory use experiences and high perceived quality (Aaker, 1991). This study does not use a behavioral definition of loyalty because it has some limitations. Data about repeated purchases could be expensive to obtain or, even if it isn't the case, a consumer can switch a brand because of the lack of availability, or because he is loyal to multiple brands (Aaker, 1991).

Keller (1993) gives a general explanation for attitude formation, based on an expectancy-value model: attitude is a multiplicative function of (1) the salience of beliefs a consumer has about branded products (strength of associations) and (2) the evaluative judgment of those beliefs (content of associations). Consequently, it can be argued that the dilutive effect of junior brands on the strength and content of the senior brand's associations (e.g. regarding quality) could extrapolate to attitudinal loyalty. Moreover, HBT also suggests the possibility that undesirable new associations attached to the senior brand could trigger a negative change in consumer attitudes towards that brand, such as a psychological mechanism to avoid an imbalanced state. The following hypotheses synthetize the above discussion:

H4a: exposure to a junior brand reduces attitudinal loyalty to the senior brand.

H4b: the strength of associations mediates the effect of the junior brand on attitudinal loyalty.

H4c: the perceived quality mediates the effect of the junior brand on attitudinal loyalty.

2.3.2 Brand equity and purchase behavior

The overall brand equity (OBE) construct has been defined by Yoo, Donthu and Lee (2000) as the difference in consumer preference and choice between the branded and unbranded product. This definition aligns with previous authors' conceptualization of brand equity (Aaker, 1991; Farquhar, 1989; Keller, 1993). In our conceptual model, OBE is influenced by some of the BE dimensions, and is an antecedent of purchase behavior.

Loyalty, as a positive attitude towards and commitment to buying the brand instead of competitors' brands, contributes to the differential consumer preference. It can be argued that perceived quality, conceptualized as a comparative-to-competitors judgment (Aaker, 1991; Zeithaml, 1988), allows for differentiation of the brand in the consumer's mind,

when compared to competitors. Thus, it is expected that greater perceived quality and loyalty leads to greater overall brand equity. Awareness and strength of associations relate positively to OBE, but through perceived quality and loyalty, as was explained in the previous section. When perceived quality and loyalty are diluted, it is expected that OBE should also be diluted. Therefore:

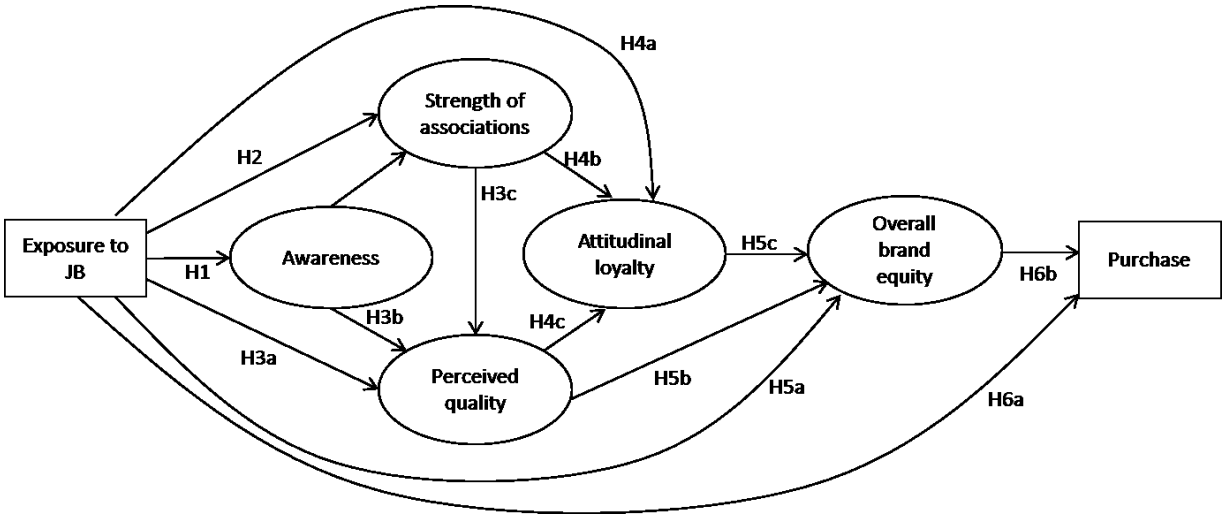
H5a: exposure to the junior brand dilutes overall brand equity.
H5b: perceived quality mediates the effect of the junior brand on overall brand equity.
H5c: loyalty mediates the effect of the junior brand on overall brand equity.

Finally, it can be argued that strong brand equity that is supported by strong and positive associations, and a positive attitude towards the brand relates positively to brand purchase in the marketplace. Empirical research has shown a positive effect of brand equity on consumer desired responses: price premium, positive attitudes towards brand extensions, brand preference and purchase intention (Buil et al., 2013). Therefore, the following hypothesis is postulated:

H6a: exposure to the junior brand reduces the senior brand purchase.
H6b: overall brand equity mediates the effect of the junior brand on brand purchase.

The above hypotheses are illustrated in figure 4.3, where mentioned relationships among BE dimensions are also summarized.

Figure 4.3. Conceptual Model



3 Methodology

An experimental approach was taken in order to evaluate the effect of junior brands on senior brands. The analysis is divided into three studies. The first study applies traditional tests for assessing for tarnishment effects (Jacoby, 2008), comparing the brand evaluation and change in behavioral intentions between control (not exposed to junior brand) and treatment (exposed to junior brand) groups. The second study compares the level of each brand equity dimension, an overall brand equity construct (OBE) and brand purchase, between control and treatment groups. The third study relates to the mediation effect of brand equity on purchase decision, applying a structural equations model (SEM) to the total sample, with a dichotomous dependent variable and brand familiarity as a control variable.

3.1 General procedures and sample

Two focus groups (men and women) and a pretest (n=59) among undergraduates were performed to select four senior brands from different product categories and to identify the correspondent distinctive attributes. Table 4.1 summarizes the selections made, including the proposed tarnishing junior brands (product categories and attributes). Two

graphic designers elaborated visual advertisements for senior, junior and other brands which were used as distractors.

An experimental between-subjects study was conducted to test the study's hypotheses. A total of 245 undergraduate students from a large university in Ecuador were randomly assigned to 1 of the 8 experimental groups: 4 brands (Rexona, Coca-Cola, BIC, Colgate) ×2 exposure (not exposed/exposed to junior brand) conditions. After seeing a set of three ads (senior/junior brand plus two distractor brands), each participant was told he/she would receive 5 U.S. dollars to make purchases of, at least, three product categories, from which one of those corresponded to the senior brand's product category in his/her experimental group. Then, a web-based questionnaire developed on Jotform® was provided with demographic and filter questions, and questions related to variables from studies 1 to 3. Participants also reported how familiar they were with each of the senior brands (1=Not at all familiar - 7=Very familiar) (Choi et al., 2014; Ferraro, Kirmani and Matherly, 2013; Morrin, 1999; Reinholtz, Bartels and Parker, 2015).

Table 4.1. Selected product categories, senior and junior brands, and distinctive attributes

			Junior brands	
Product categories for senior brand	Senior brands (most often used)	Distinctive attributes	Brand name, product categories	Attributes
Toothpaste	Colgate	fresh breath, good taste, effective cleaning	Colgato, cat toothpaste	for cats, no flavor, no scent
Deodorant	Rexona*	maximum protection, good fragrances, effective	Rexona, insecticide	(it) eliminates all kinds of insects, (it) does not leave you alone
Carbonated soft drink	Coca-Cola	unique taste, good taste, refreshing	Coca Cleaner, toilet cleaner	(it) sanitizes and cleans instantly, secret formula
Pen	BIC	economical, high quality, durable	Dr. BIC, fleet enema	for constipation, (it) does not fail

* Known as *Degree* in the United States

The questionnaire was translated by a professional translator from Ecuador, then checked by a marketing professor for conceptual equivalence (following Douglas and Craig, 2007)

and, finally, back-translated to the English by a professional translator from the United States. Both translators work for the Center for Foreign Languages (CELEX) of *Escuela Superior Politécnica del Litoral* (ESPOL) in Guayaquil. The back-translated and original versions of the questionnaire showed a high level of coincidence.

4 Study 1

4.1 Measures and procedures

Jacoby (2008) proposed a methodology to measure change (control versus treatment groups) in attribute evaluation and consumers' attitudes towards the senior brand (purchase intention and consumption intention). Attributes are specific for each brand and were selected with a qualitative analysis: an open question about distinctive aspects of the brands was asked during the pre-test and, then, words with similar meaning were categorized[16]. Attributes were evaluated on a 7-point Likert scale and a t-test for independent samples was used to assess for differences between groups, after adjusting for unequal variances. Regarding intentions change, Jacoby's questions are: "As a result of seeing this material, would you be more likely or less likely to buy/consume [brand & product], or wouldn't it matter?" Since the responses are categorical (more likely/less likely/doesn't matter), a contingency table and a Chi-square test for differences between groups were used.

4.2 Results

Figure 4.4 shows the attributes evaluation for the four brands. There is no significant evidence of evaluation dilution in any of the brands. The Coca Cola "healthy"

[16] In the case of Coca-Cola, the aspect "unhealthy" emerged in the pretest, but it was used as "healthy" in the main study.

characteristic showed the biggest reduction, but there was not a significant difference, comparing treatment versus control groups.

Figure 4.4. Attribute evaluation by brand

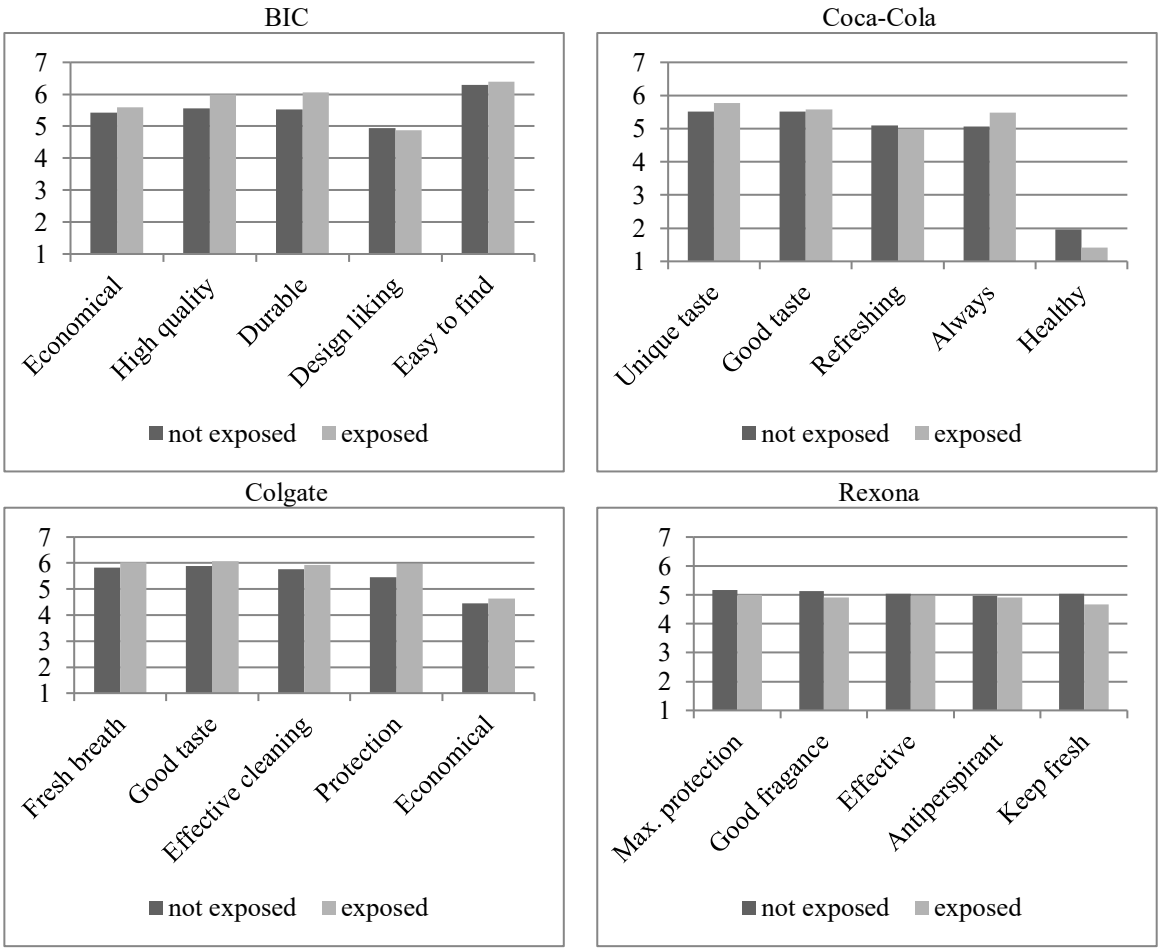
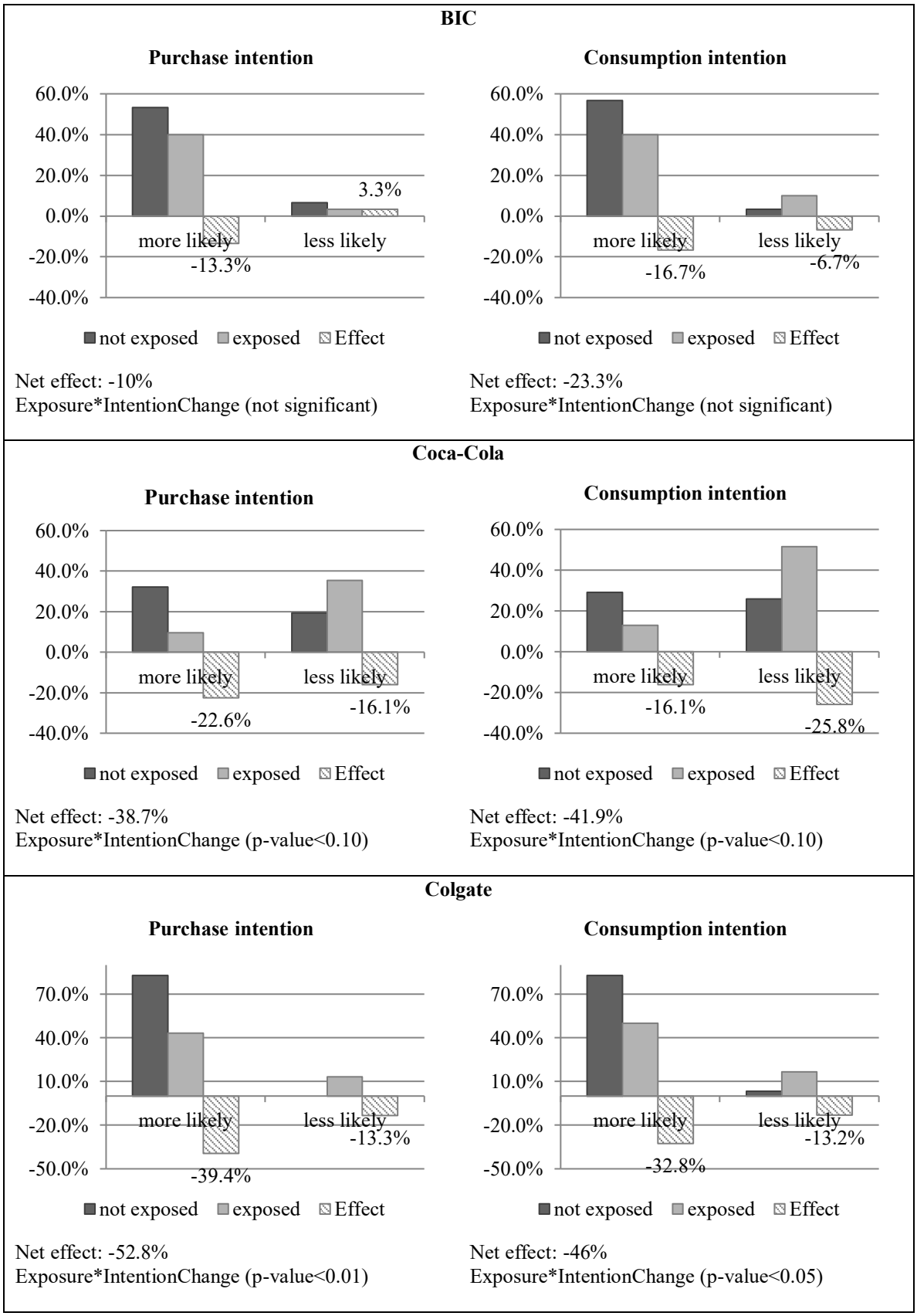
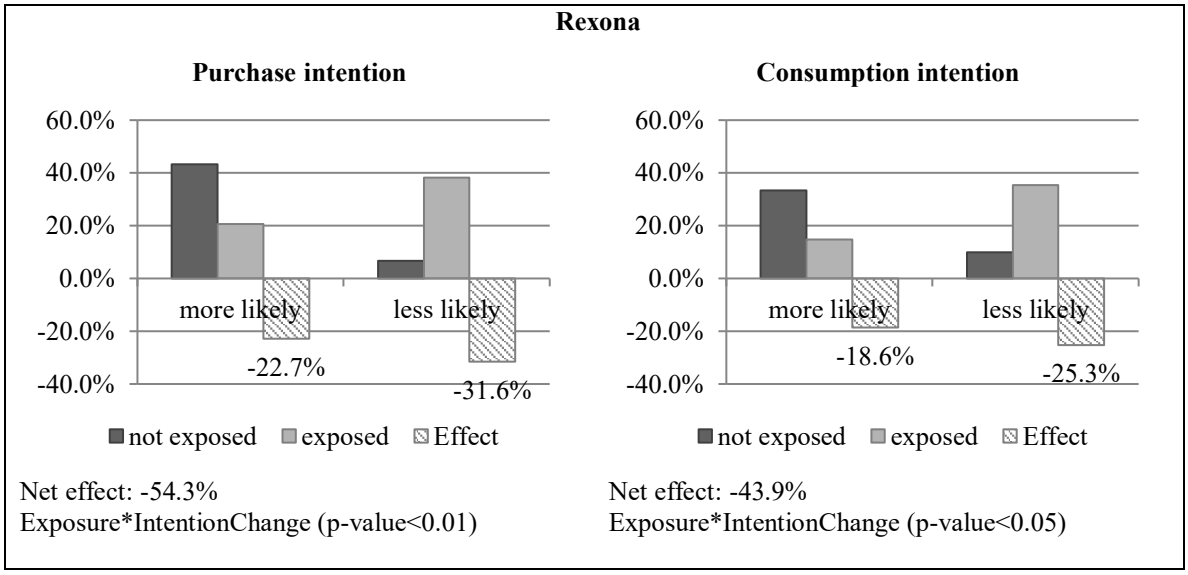


Figure 4.5 shows the responses relating to purchase intention and consumption intention. A negative/positive change of intentions (dilution/enhancement) is computed when the percentage of *more likely* responses in the treatment group (exposed) is lower/greater than the control group (not exposed), or when the percentage of *less likely* responses in the treatment group is greater/lower than the control group. The net effect is the sum of both effects. In two of the four brands (Rexona and Colgate), there was a significant negative net effect in intentions i.e. dilution. There is no reason to think this finding is due to familiarity since Colgate has the greater familiarity among the four brands (M_{Rexona}=4.91; $M_{CocaCola}$=5.89; M_{BIC}=6.37; $M_{Colgate}$=6.63; F_{BRAND}=22.84; p=0.000).

Figure 4.5. Intentions changes





5 Study 2

5.1 Measures and procedures

For study 2, participants were asked a set of 21 items about dependent variables: awareness, strength of associations, perceived quality, attitudinal loyalty and overall brand equity (Yoo et al., 2000; Netemeyer et al., 2004) (Table 4.2). Yoo et al. (2000) propose to measure OBE through the intention to buy or the preference for the famous brand in comparison with a competing brand that shares all the brand characteristics, except its brand name. All items were measured on seven-point Likert scales.

A confirmatory factor analysis (CFA) was done and summated scales were computed in order to have a single measure for each construct. Purchase decision was operationalized with a dichotomous variable, which took the value of 1 when the participant bought the senior brand, and 0 otherwise. T-tests for independent samples were run to assess for differences between groups' means, after adjusting for unequal variances, and a Chi-square test was performed for the difference in proportions between groups (for purchase decision analysis).

Table 4. 2. Measures for study constructs

Item		Scale	CFA standardized weights
Awareness (AWA) (Yoo et al., 2000; Netemeyer et al., 2004):			
CR=0.815; AVE=0.525; ASV=0.615; MSV=0.93			
aa1	I know what X looks like.	(1=Totally disagree - 7=Totally agree)	0.692
aa2	I can recognize X among other competing brands.		0.757
aa3[a]	I am aware of X.		0.635
aa4[a]	I am aware of X.		-
aa8	When I think of (senior brand product category), X is one of the brands that comes to mind.		0.804
Associations (ASSO) (Yoo et al., 2000):			
CR=0.709; AVE=0.552; ASV=0.602; MSV=0.93			
aa5	Some characteristics of X come to my mind quickly.	(1=Totally disagree - 7=Totally agree)	0.815
aa6	I can quickly recall the symbol or logo of X.		0.662
aa7r	I have difficulty in imagining X in my mind (r).		-
Perceived Quality (PQU) (Yoo et al., 2000):			
CR=0.939; AVE=0.754; ASV=0.569; MSV=0.614			
pqu1	X is of high quality.	(1=Totally disagree - 7=Totally agree)	0.914
pqu2	The likely quality of X is extremely high.		0.905
pqu3	The likelihood that X would be functional is very high.		0.859
pqu4	The likelihood that X is reliable is very high.		0.827
pqu5	X must be of very good quality.		0.831
pqu6r	X appears to be of very poor quality (r).		-
Loyalty (LOY) (Yoo et al., 2000):			
CR=0.902; AVE=0.755; ASV=0.592; MSV=0.793			
loy1	I consider myself to be loyal to X.	(1=Totally disagree - 7=Totally agree)	0.887
loy2	X would be my first choice.		0.912
loy3	I will not buy other brands if X is available at the store.		0.804
Overall Brand Equity (OBE) (Yoo et al., 2000):			
CR=0.817; AVE=0.531; ASV=0.567; MSV=0.793			
obe1	It makes sense to buy X instead of any other brand, even if they are the same.	(1=Totally disagree - 7=Totally agree)	0.683
obe2	Even if another brand has the same features as X, I would prefer to buy X.		0.839
obe3	If there is another brand as good as X, I prefer to buy X.		0.752
obe4	If another brand is not different from X in any way, it seems smarter to purchase X.		0.622

Notes: a. Two items with alternative translation were used, as suggested during the conceptual equivalence analysis. CR: composite reliability; AVE: average variance extracted; ASV: average shared variance; MSV: maximum shared variance.

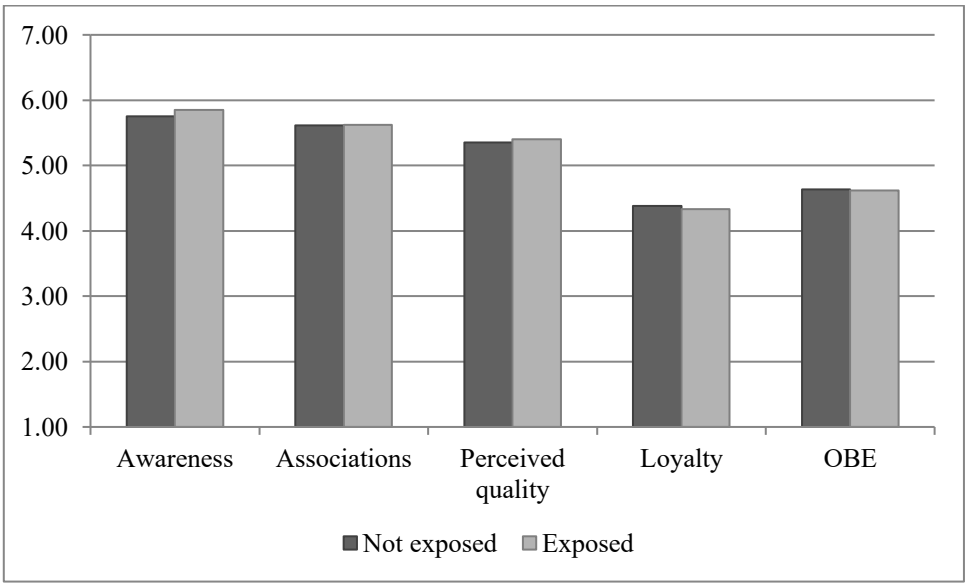
5.2 Results

Results are reported for the total sample (Table 4.3 and Figure 4.6). There weren't significant differences between the control and treatment groups in any of the BE dimensions, nor in the OBE construct (all p's > 0.05).

Table 4.3. Total sample: tests for mean differences in BE dimensions (not exposed vs. exposed)

	Not exposed		Exposed			
BE dimensions	**Mean**	**Std. Error**	**Mean**	**Std. Error**	**t-test**	**p-value**
Awareness	5.75	0.1092	5.86	0.1070	-0.6555	0.513
Associations	5.61	0.1283	5.62	0.1258	0.0028	0.998
Perceived quality	5.36	0.1223	5.40	0.1198	-0.2756	0.783
Loyalty	4.38	0.1747	4.33	0.1712	0.1930	0.847
Overall brand equity	4.63	0.1347	4.62	0.1320	0.0703	0.944

Figure 4.6. Total sample: means for BE dimensions (not exposed vs. exposed)



There was a reduction in senior brand purchase (%) for exposed consumers (41.6%), compared to not exposed consumers (50.8%), but this difference was not statistically significant (*Chi-square*=2.10; *p*=0.147). When replicating the analysis by brand, none of the BE constructs changed significantly. Regarding brand purchase, only Rexona showed a marginally significant reduction of purchase within exposed consumers (*Chi-square*=2.96; *p*=0.086).

5.3 Preliminary discussion

The results of the first two studies show no significant change in awareness, strength of associations, perceived quality, loyalty, attributes evaluation and purchase decision (except for Rexona at α=10%). However, there is a significant negative change in

intentions for two of the four brands, according to the methodology suggested by Jacoby (2008). What seems surprising and counterintuitive is to see those changes in intentions when associations were not weakened, perceived quality and attributes did not change negatively, and attitudinal loyalty was not diluted due to exposure to the junior brand. Finally, there is weak evidence that change in intentions translate to change in behavior (significant reduction of purchase in Rexona at α=10%). The structural model in study three would provide deeper insight regarding the relation between brand equity and purchase.

6 Study 3

6.1 Measures and procedures

The same items from study 2 for BE dimensions and OBE construct were used for this study. The conceptual model depicted in Figure 4.3 was tested with a Structural Equation Model (SEM) in AMOS, using a dichotomous variable as dependent variable representing purchase decision (1=the participant purchased the senior brand). AMOS uses a probit model for categorical outcomes. The Bayesian estimation with Markov Chain Montecarlo simulation (MCMC) was performed when fitting the probit model in AMOS (Arbuckle, 2013). Exposure to the junior brand was, also, represented with a dichotomous variable, which took the value of one when the participant was assigned to a treatment group, following Arbuckle (2013), and Bagozzi and Yi's (1989) suggestion. Familiarity was included as a control variable.

6.2 Results

6.2.1 Measurement model

The measurement model for BE dimensions and OBE was evaluated in AMOS. CFA suggested deleting items aa4, aa7 and pqu6 due to low factor loadings. A new measurement model without mentioned items showed good construct reliability and

convergent validity (composite reliability, CR>0.7; average variance extracted, AVE>0.5). However, there is a lack of discriminant validity among awareness and associations constructs (AVE < average shared variance, ASV). Past research (Yoo and Donthu, 2001; Yoo et al., 2000) has shown that awareness and associations dimensions perform better together, but in this study we kept them separate, since the theoretical background suggests a hypothetically different effect from junior brands across these dimensions. High correlation between OBE and loyalty causes a lack of discriminant validity for these two dimensions' items. Finally, the measurement model showed an acceptable fit (CMIN/df = 2.476; GFI=0.869; CFI=0.943; RMSEA=0.078).

6.2.2 Structural Model

Convergence of Bayesian estimation was achieved accomplishing the threshold (1.1) as suggested by Gelman et al. (2004). EXPOS did not dilute any brand equity dimensions, nor overall brand equity or brand purchase (all *p*'s >0.10). Thus, H1a was supported, whereas H2, H3a, H4a, H5a and H6a were rejected. Familiarity showed a positive relationship with brand awareness (β=0.481; *p*=0.000) and loyalty (β =0.348; *p*=0.000)[17]. Some brand equity relationships were found to be significant: AWA→ASSO (β=0.921; *p*=0.000), PQU→LOY (β=0.706; *p*=0.000), LOY→OBE (β=0.537; *p*=0.000). OBE influenced positively PURCH (β=0.476; *p*=0.000) (see Table 4.4 for detailed findings). The *pseudo-*R^2 (Grace et al., 2012) for brand purchase is 0.289. Finally, regression weights of all items were statistically significant.

[17] Further analysis included an interaction term familiarity*exposure to all BE dimensions, but any parameter was statistically significant.

Table 4.4. Coefficients from structural model (MCMC output)

H_0's	Regression weights	Mean	S.D.	95% Conf. Interval		C.R.	P	
				Lower bound	Upper bound			
H1a,b	AWA←EXPOS	0.154	0.126	-0.087	0.406	1.222	0.222	
H2	ASSO←EXPOS	-0.066	0.107	-0.277	0.145	-0.617	0.537	
H3a	PQU←EXPOS	-0.015	0.212	-0.403	0.444	-0.071	0.944	
H4a	LOY←EXPOS	0.019	0.16	-0.286	0.341	0.119	0.905	
H5a	OBE←EXPOS	-0.007	0.109	-0.222	0.207	-0.064	0.949	
H6a	PURCH←EXPOS	-0.27	0.172	-0.607	0.066	-1.570	0.116	
BE relations:								
	ASSO←AWA	0.921	0.112	0.706	1.157	8.223	0.000	***
H3b	PQU←AWA	1.191	1.058	-1.311	3.248	1.126	0.260	
H3c	PQU←ASSO	-0.194	1.117	-2.343	2.454	-0.174	0.862	
H4b	LOY←PQU	0.706	0.093	0.53	0.898	7.591	0.000	***
H4c	LOY←ASSO	0.213	0.155	-0.094	0.516	1.374	0.169	
H5b	OBE←PQU	0.093	0.07	-0.042	0.232	1.329	0.184	
H5c	OBE←LOY	0.537	0.074	0.4	0.691	7.257	0.000	***
H6b	PURCH←OBE	0.476	0.09	0.313	0.665	5.289	0.000	***
	AWA←FAM	0.481	0.054	0.379	0.592	8.907	0.000	***
	ASSO←FAM	-0.001	0.05	-0.101	0.099	-0.020	0.984	
	PQU←FAM	0.055	0.085	-0.12	0.21	0.647	0.518	
	OBE←FAM	0.053	0.051	-0.047	0.155	1.039	0.299	
	LOY←FAM	0.348	0.078	0.198	0.502	4.462	0.000	***

*Notes: *p<0.10; **p<0.05; ***p<0.01*

7 General discussion

Results from the structural model in study three confirm findings from studies one and two, in the sense that none of the brand equity dimensions were diluted by junior brands. It is worth mentioning that the relations among BE dimensions hold in several cases as expected by brand equity theory. Furthermore, brand equity positively related to brand purchase. Taking into account Jacoby's measures, intentions toward two of the four brands were negatively affected. This finding does not relate with a lack of familiarity, since one of these two brands had the highest familiarity in the pool of brands used

($M_{Colgate}$=6.63). What we think is probably causing this reduction in Jacoby's measurements, is that the questions make salient the tarnishing ads ("As a result of seeing this material, would you be more likely or less likely to buy/consume [brand & product], or wouldn't it matter?"), thus increasing the possibility of negative responses, i.e. a framing effect (Stalans, 2012).

The lack of evidence of dilution is opposed to findings from previous studies concerning trademark dilution (Morrin and Jacoby, 2000; Morrin et al., 2006; Pullig et al., 2006). However, these studies do not use tarnishing junior brands, as the present research does. According to previous studies, dilution is more severe when both brands are perceived highly dissimilar. One might think that tarnishing junior brands might have a strong dilutive effect, since they are very dissimilar to senior brands, or have undesirable attributes. However, a possible explanation for our results emerges from psychological theories, such as categorization/subtyping and Heider's Balance Theory (HBT). The subtyping model regarding mental schemas assumes that schemas are hierarchical structures that evolve through experience or new information (Weber and Crocker, 1983). When discrepant or incongruent information is acquired, and cannot be assimilated to be part of the established schema, a subcategory is created in order to differentiate (or discriminate) it from the upper category. In the context of this study, the junior brand would have been interpreted as an exception and unrepresentative of the well-established senior brand, a reaction also predicted by HBT in order to recover the balanced state. In this sense, the information concerning the junior brand would have been stored in a subcategory without the dilutive effect on senior brand schema. In accordance with these arguments, Choy and Kim (2013) found that when consumers are familiar with a senior brand, exposure to a junior brand reinforces the senior brand's personality, regardless of the level of similarity between both brands.

8 Conclusions, limitations and future research

The debate on whether unauthorized use of famous/well-known trademarks generates economic harm for trademark holders gives relevance to this research. Theory about brand equity predicts that strong brand equity relates to desirable behavioral consequences in consumers, such as positive word of mouth, willingness to pay price premiums and buying more branded products (Buil et al., 2013), which translates into greater firm value (Keller and Lehmann, 2006). Our results demonstrate that brand equity positively influences purchase decision. Results also confirm that perceived quality and attitudinal loyalty are significant dimensions of brand equity. Therefore, an eventual dilutive effect of junior brands in senior brand's equity could erode brand and firm value.

Considering that the positive relationship between BE and purchase decision holds true, this research's results suggest that the concern of trademark holders must be as to whether their BE is strong enough to repeal the supposed negative effect of junior brands in consumers' beliefs, perceptions and attitudes toward the famous brands. According to our results, supposedly tarnishing brands do not necessarily dilute senior brands because the consumer may identify these imitators as exceptions to the famous brands, thus refusing to attach new associations to well-established brands or to negatively modify the existing ones. When interpreting our findings, it is worth remembering that the trademarks used in this research have a high degree of familiarity among consumers. Brands with less familiarity or a weaker brand equity could suffer negative and significant effects from tarnishing junior brands.

As a practical implication of our previous conclusion, policymakers, as well as legal and marketing practitioners, may not take for granted a negative effect of supposedly tarnishing imitators. Although surveys are widely used in pretrial stages, with an

influential impact on the outcome of the cases, the percentage of these studies used in trials is significant lower (Diamond and Franklyn, 2014). We suggest that field studies must be used as evidence in trademark litigation in order to demonstrate whether a junior brand is significantly eroding a famous brand's distinctiveness, reputation, evaluation or other concepts referred to in the legal framework. Moreover, an important feature for field studies used in this context is that they must include appropriate control mechanisms for minimizing criticism regarding internal validity (Diamond and Franklyn, 2014; Jacoby, 2002).

The research reported here is limited, in the sense that it was conducted with convenience samples of students in artificial laboratory settings. Additional research could examine whether the results obtained in these studies apply to different groups of consumers. On the other hand, despite the critics of the artificiality of experiments, this methodology allows for the focus of the analysis to remain on the causal relationships of interest, controlling for other variables involved in the studied phenomenon (Brewer, 2000; Crano and Brewer, 2002). Moreover, as Jacoby (2002) says, in trademark litigation there is a growing demand for controlling plausible explanations of the observed effects. These arguments are evident when reviewing the trademark dilution empirical studies, all of which used experiments (Morrin y Jacoby, 2000; Morrin et al., 2006; Pullig et al., 2006; Choy and Kim, 2013). Despite its limitations, this research contributes to extant literature with some novelties. It provides evidence regarding tarnishment, since past empirical literature focused on blurring cases. In addition, it analyzes the impact of junior brands within a theoretical framework of consumer-based brand equity, and extrapolates to brand purchase as a critical variable to prove economic harm.

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10 Appendix 2: ads for senior and junior brands

Rexona deodorant

Rexona insecticide

Bic pen

Dr. Bic fleet enema

Colgate toothpaste

Colgato cat toothpaste

Coca Cola soda

Coca cleaner, toilet cleaner

CAPÍTULO V. CONCLUSIONES GENERALES, LIMITACIONES Y FUTURAS LÍNEAS DE INVESTIGACIÓN

El uso no autorizado de marcas famosas puede presentarse en la forma de marcas imitadoras (denominadas también *junior brands*) que usan el nombre de una marca famosa, o una variante muy similar de éste, para fabricar y comercializar otros productos o servicios. El propósito de la investigación fue analizar el efecto de las *junior brands* sobre el capital de marcas famosas *(brand equity)* y la conducta de compra de sus consumidores. El capital de marca fue estudiado en sus múltiples dimensiones desde la perspectiva del consumidor, siguiendo la conceptualización de Aaker (1991), mientras que la conducta de compra se midió con una actividad de compra real, con un presupuesto en dólares para cada consumidor y la entrega física de los productos seleccionados. Se realizó este análisis separando en casos de hipotético *blurring* y de hipotético *tarnishment*. En los casos de *blurring*, los resultados mostraron que se generó dilución de marca, evidenciada en una reducción de la fuerza de las asociaciones en la mente del consumidor, en una reducción de la actitud a ser leal, en una reducción de la percepción de valor agregado que le genera la marca famosa al consumidor (capital de marca global), y, como consecuencia de lo anterior, en una reducción de la compra de los productos de la marca. Los resultados también mostraron que a medida que la marca imitadora es percibida como más parecida a la marca famosa, la dilución se reduce, lo cual coincide con resultados de estudios previos (Morrin and Jacoby 2000; Pullig et al. 2006). Por otro lado, en los casos de hipotético *tarnishment*, esta investigación mostró que no se generó reducción en la valoración de los atributos de la marca famosa por parte de sus consumidores, no se observó dilución del capital de marca en ninguna de sus dimensiones ni en el constructo global, ni tampoco una reducción significativa de la compra de los productos de la marca. Sin embargo, y curiosamente, en dos de las cuatro marcas famosas usadas en la

investigación, la exposición a las *junior brands* generó una reducción de las intenciones de compra y de consumo, según las mediciones sugeridas por Jacoby (2008).

1 Contribuciones teóricas

Esta investigación ha mostrado que el efecto de las marcas imitadoras puede ir más allá del debilitamiento de las asociaciones relacionadas a la marca famosa. Sobre la base del marco teórico de capital de marca y el modelo de redes asociativas, ahora conocemos que la lealtad - en un sentido actitudinal, la percepción de valor agregado o diferenciación de la marca y la compra de sus productos, se pueden ver afectados por el surgimiento de marcas imitadoras. Estos resultados se presentaron con casos de *blurring*.

Keller (1993) explica que la fuerza y contenido de las asociaciones influyen en la formación de la actitud, por lo cual, según nuestro resultados, la reducción de la lealtad actitudinal estaría asociado, al menos parcialmente, al debilitamiento de las asociaciones sobre la marca en la mente del consumidor. Si bien el contenido de las asociaciones sobre la calidad de los productos (calidad percibida) no se vieron afectadas, y considerando que los resultados mostraron una mediación parcial de la fuerza de las asociaciones en el efecto de la marca imitadora hacia la lealtad, podría interpretarse que otro tipo de asociaciones útiles para formar juicios evaluativos sobre la marca pudieron verse afectadas, contribuyendo de esa forma a la dilución de la lealtad actitudinal. Como explican Aaker (1991) y Oliver (1997), la lealtad no se puede explicar completamente por las percepciones y creencias de los consumidores sobre los atributos de la marca, debido a que tiene un componente afectivo.

La teoría sobre capital de marca predice también que una reducción de sus dimensiones afecta al constructo global asociado con el valor agregado que otorga la marca al

consumidor, y consecuentemente, el efecto se extrapola hacia la conducta de éste. Los resultados confirman lo predicho en la teoría, ya que la dilución del capital de marca global afectó la compra de los productos de la marca.

La ausencia de dilución en los casos de *junior brands* hipotéticamente degradantes contribuye a la literatura sobre el procesamiento de información relacionada con las marcas, proveniente, en este caso, de un tercero no autorizado. Dos explicaciones plausibles para este resultado provienen de la psicología, y son: (1) la Teoría de Balance de Heider, según la cual un mecanismo de defensa del consumidor para volver a una situación de balance (luego de estar expuesto a una *junior brand*) es rechazar la asociación entre la marca original y los nuevos atributos/productos/situaciones desagradables o no deseados; y (2) el modelo *subtyping*, que predice que cuando el individuo recibe información incongruente con el estereotipo que se establecido respecto de la marca famosa, crea una subcategoría con la nueva información, reconociéndola como una excepción, y reduciendo la posibilidad de que se modifique el estereotipo original. Finalmente, vale la pena mencionar que, al igual que en los estudios con casos de *blurring*, el capital de marca mostró una relación positiva con la decisión de compra en la muestra expuesta a casos de hipotético *tarnishment*.

2 Contribuciones empíricas

La investigación presenta algunos aportes empíricos a la literatura. En primer lugar, provee evidencia sobre hipotéticos casos de *tarnishment*, considerando que hasta la fecha los estudios sobre dilución de marcas registradas en revistas indexadas se enfocaban en casos de *blurring* (Morrin y Jacoby, 2000; Morrin et al., 2006; Pullig et al., 2006; Choy y Kim, 2013). Segundo, permite analizar el efecto de la similitud de una manera más robusta al utilizarla como variable de intervalo en lugar de categórica, midiéndola como

similitud percibida a nivel de los sujetos participantes. Tercero, la investigación hace uso de modelos de ecuaciones estructurales en estudios de dilución de marcas registradas, que ofrecen, entre otras ventajas, la posibilidad de analizar simultáneamente mediaciones (por ejemplo, exposición a JB → Capital de Marca → Decisión de Compra) y efectos moderadores (similitud); metodología que no había sido utilizada aún en los estudios revisados. El último artículo, relacionado con casos de *tarnishment*, permite contrastar las metodologías tradicionales (contraste de medias de valoración de atributos de la marca, contraste de porcentajes de sujetos que compran la marca) con el modelo estructural. Si bien los resultados son similares, el modelo estructural permite evaluar la cadena de efectos desde las marcas imitadoras al capital de marca y a la decisión de compra. En esta comparación de metodologías, hay un resultado que llama la atención y tiene que ver con la reducción de intenciones de compra y de consumo según las preguntas sugeridas por Jacoby (2008) en dos de las cuatro marcas utilizadas en el estudio. Resulta raro que las intenciones se reduzcan cuando variables actitudinales (que preceden la intención) como la lealtad y el capital de marca global no se ven afectadas, y también que una variable conductual (decisión de compra) precedida por la intención no se reduzca significativamente. Una explicación plausible a este resultado tiene que ver con que las preguntas de intención hacen saliente el anuncio publicitario degradante, lo que generaría un efecto marco (*framing effect*) en las respuestas de los participantes del experimento (Stalans, 2012).

Finalmente, la investigación también sirve como ejemplo de la aplicación de modelos de ecuaciones estructurales en diseños experimentales y en modelos con respuesta categórica, considerando que la variable decisión de compra se operacionalizó como como una variable dependiente dicotómica.

3 Limitaciones y futuras líneas de investigación

A pesar de las contribuciones resaltadas anteriormente, se deben mencionar las limitaciones de la investigación. Las categorías de productos utilizadas pertenecen a la tipología de conveniencia o preferencia, según Murphy y Enis (1986), caracterizadas por: bajos niveles de precio, bajo esfuerzo de búsqueda y bajo riesgo percibido de que el producto no brinde los beneficios buscados. Murphy y Enis agregan que estos tipos de productos podrían catalogarse como de bajo involucramiento. De acuerdo con el Modelo de Posibilidad de Elaboración (Petty et al., 1983; Petty y Caccioppo, 1984), el grado de involucramiento del consumidor con una categoría de producto influye en el nivel de análisis que hace el consumidor sobre la información que recibe. Estudios de extensiones de marca (Maoz y Tybout, 2002; Nijssen et al., 1995; Dens y De Pelsmacker, 2010) han mostrado que los consumidores evalúan las extensiones de marca de manera distinta dependiendo del grado de involucramiento con la categoría de producto, por lo cual se podría suponer que un fenómeno similar se pudiera presentar en el contexto del surgimiento de marcas imitadoras. Estudios futuros podrían utilizar marcas pertenecientes a categorías de productos del tipo compra comparada o especialidad (Murphy y Enis, 1986), con el objetivo de analizar si la dilución se ve moderada por el involucramiento.

Por otro lado, la muestra de estudiantes universitarios utilizada en la investigación limita la validez externa de las conclusiones. Sin embargo, cabe señalar que esto no afecta la validez interna, considerando que las marcas utilizadas en el estudio fueron seleccionadas luego de varios pretests que permitieron identificar tanto categorías de productos como marcas más recordadas y utilizadas en una muestra de la misma población. Adicionalmente, Calder et al. (1981) justifican el uso de muestras de estudiantes cuando la investigación busca poner a prueba teorías, lo cual permite poner en práctica el criterio

de falsabilidad de Popper. Cabe mencionar que los principales estudios sobre dilución de marcas revisados (Choy and Kim 2013; Morrin and Jacoby 2000; Morrin et al. 2006; Pullig et al. 2006) utilizaron muestras de estudiantes. Estudios posteriores podrían aportar a la generalización de estos hallazgos utilizando muestras con otros tipos de consumidores.

Se han utilizado marcas imitadoras ficticias debido a las limitaciones de encontrar imitaciones reales en un mismo mercado, en un mismo punto del tiempo, y que cumplan con las características de las variables que se pretende analizar y controlar. Situaciones de imitaciones reales podrían existir, pero en ese caso el presumible efecto ya estaría presente en los consumidores y por no contar con mediciones de las variables de interés antes del surgimiento de la imitadora, no se podría estimar el efecto mediante un diferencial pre y postest. Una alternativa sería utilizar un grupo de comparación (consumidores) de otro mercado donde no esté presente la imitadora, pero este no cumpliría con las condiciones de una asignación aleatoria. El problema con esto es que las muy probables diferencias a observarse en las características de las dos muestras de consumidores representan amenazas a la validez interna del estudio. Un trabajo próximo de publicación (Macías y Balcázar, en prensa), sobre el eventual efecto de una parodia ecuatoriana a una famosa serie televisiva mexicana, muestra este tipo de amenazas al encontrar diferencias significativas en la variable nacionalidad entre las dos muestras, lo cual en ese caso pudiera influir en cómo cambian las actitudes ante la serie debido a la parodia.

Las críticas más fuertes a los experimentos tienen que ver con la artificialidad del escenario creado (Babbie, 1998), que podría socavar la validez externa del estudio si se estima que la misma conducta observada en el laboratorio no ocurriría en un escenario

real. Sin embargo, el diseño experimental ofrece varias ventajas que hacen preferible su utilización, como el hecho de permitir determinar relaciones causales entre las variables estudiadas según el propósito de la investigación (Brewer, 2000), debido a que se puede diseñar el experimento controlando el resto de condiciones para aislar su efecto (Crano y Brewer, 2002). Jacoby (2002) señala que en los estudios presentados en litigios de marcas, en donde se argumenta que alguna marca presumiblemente infractora ha afectado a otra marca (generalmente famosa), cada vez más se expresa la necesidad de "controlar" por explicaciones plausibles del efecto observado. Esta demanda por control pone en ventaja a los experimentos sobre otras metodologías.

Finalmente, para crear las marcas imitadoras en esta investigación, se utilizó el mismo nombre de la marca famosa o alguna variante muy similar de ésta en distintas categorías de productos manipulando el grado de similitud de sus aspectos distintivos. Estudios posteriores podrían comparar el efecto de la imitación de otros elementos de la marca (empaque, slogan, etc.) en otras o en la misma categoría de productos, inclusive, para profundizar el entendimiento de la dilución de marcas. Otra línea de investigación podría surgir con respecto de la dilución de marcas de servicios o de marcas B2B.

4 Implicaciones para la administración y *policymakers*.

Los resultados presentados aquí tienen implicaciones para administradores, *policymakers* y profesionales involucrados con litigios sobre marcas registradas. Primero, se resalta la importancia de proteger las marcas debido a su uso no autorizado por terceros debido a la posibilidad de sufrir daños en las asociaciones, actitudes y comportamiento de los consumidores de la marca. Las empresas deberían hacer mediciones periódicas de las dimensiones de capital de marca para detectar si están siendo afectadas. Considerando que las asociaciones son susceptibles de debilitarse e influyen en otras dimensiones del

capital de marca, se hace necesario emprender acciones para recuperar su fuerza. Por otro lado, la reducción de la lealtad actitudinal debe contrarrestarse para evitar pérdida de valor de la marca en el largo plazo. Está demostrado que la lealtad se relaciona positivamente en la tasa de retención de clientes de una marca o negativamente con la probabilidad de cambio. Conocer cuál es la imagen de la marca en la mente del consumidor y por qué a este le gusta o está comprometido con la marca resulta clave para reforzar el capital de marca en situaciones de amenazas por parte de terceros. Campañas publicitarias que resalten la imagen de la marca, que generen recuerdo de las sensaciones o experiencias satisfactorias con la misma y que permitan que el consumidor logre diferenciar al imitador del titular de la marca famosa, podrían contribuir a reforzar las asociaciones originales y reestablecer la lealtad actitudinal. De acuerdo con los resultados, la mayor preocupación para los titulares de las marcas debería estar cuando sus marcas carecen de un alto grado de renombre (baja familiaridad) o cuando las imitaciones no comparten los atributos distintivos de las marcas famosas (baja similitud).

El mostrar que la dilución está condicionada por la similitud en los casos de *blurring* y, además, la ausencia de dilución en los casos de *tarnishment*, implica que los *policymakers* y los profesionales legales y de marketing no pueden dar por sentado el daño a niveles cognitivo, afectivo y conductual debido al surgimiento de las imitadoras. En definitiva, se hace necesario que los estudios de campo sean utilizados como evidencia de la dilución actual o probable del capital de marca en los litigios sobre marcas registradas. Además, como lo ha señalado Jacoby (2008), los estudios deben incluir mecanismos de control para descartar explicaciones plausibles a los eventuales efectos atribuibles a las marcas imitadoras.

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